

the president's report

carleton university

1965|6



*The Physics Building
Completed, Summer 1966*

The President's Report

Carleton University

Colonel By Drive, Ottawa, Ontario, Canada

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Report of the President

In 1966 some large and interesting questions face Carleton, as well as other universities; and it should be said right away that they are not all to do with money.

There are, for example, subtle questions about human relationships within a lively university community of the present day. Throughout North America some undergraduates are saying that they find their universities too impersonal; that they have a sense of alienation; that they do not have as close relationships with faculty members as they would like; that they are uncertain about their purposes, and do not feel truly integrated members of the community. Carleton is far from being a large university in modern terms, but in the last year it has seen some of the signs of student unease that have appeared in a number of centres of higher learning, in the United States, and also in Canada. Interestingly enough, manifestations of these kinds of feelings seem to have appeared particularly in universities that are known for high intellectual qualities.

Some of the uncertainties and dissatisfactions of these students seem to be part of broader currents among a fraction of the whole younger generation resentful in unclear ways about the workings of modern society. But at least some of the complaints about university life, while difficult to analyse, do call for attention. Today there are many more and much stronger pressures and tensions acting in a university community than there were a generation ago. As the flood of knowledge swells, and as national and international standards of scholarship rise, more pressures come on faculty members to study, to do research and to provide advanced teaching. Students, too, want their university to stand high in intellectual reputation. University training is much more widely held to be important for young people than it used to be. University energies are called to meet intense problems of expansion, on top of current work; and if growth does not go ahead the first to complain would be students for whom there were

no places. Conditions of the times work against cosiness and tranquility in an academic community; and that is not entirely a bad thing. In any case just the students who worry about their place and purpose would probably spurn such an atmosphere. But a degree of serenity is needed in a university; and it is extremely important that everything possible be done to maintain the best possible climate for the strong development of young minds.

Carleton has to continue to grow to meet inescapable needs: and it must continue adding to its intellectual power. But senior members also need to give thought and time, as well as to regular undergraduate teaching, to planning more ways of helping junior members each to feel truly part of an academic society. It has to be recognized that there are some problems of internal human relations in this as in other lively universities. The answers are not easy, but it is well worth trying to find them.

UNIVERSITY GOVERNMENT

An allied set of questions concerns the taking of decisions in a university community. Who has a part in deciding what? And how does participation take place? This whole subject has been under active discussion in faculty circles for some time. More recently some students have shown a much keener interest in the general affairs of universities and in having a part in more of the decisions. Their general case is that since students form a major element in a university community they should share more in the decision-making processes. They argue that such a development, among other things, would draw senior and junior members more together, and would give students a better sense of participating in affairs vital to them.

Discussion of this subject was reinforced and focussed by the publication in the spring of the Report of the Duff-Berdahl Commission on University Government in Canada. Among other things it recommended faculty representation on Boards of Governors; Board representation on Senate; elected Senate; and student representation on Senate committees. The Report was widely received as a wise and discerning document, although it did not go far enough for some faculty members, and some students consider it fell short of their aims. Findings of the Commission are now being studied and argued in all Canadian universities, and almost certainly will lead to a number of major changes. At Carleton the study is being carried out by a joint committee composed of representatives from the Board of Governors, the Senate, the students, and the administration. I think

it is right that a number of the principles stated or implied by the Commission already are being met at Carleton, largely by practice and convention. For some years the faculty through the Senate have in fact originated most of the major decisions. Sizeable areas of responsibility are left entirely to the student government, and the views of students when expressed have had a very considerable bearing on a number of decisions. But undoubtedly the time has come for some more formal developments and for provision for a more cross-representation on different university bodies. Certainly recent experience at Carleton shows that a portion of students at least are developing the capacity to make very worthwhile contributions to university decisions, and to handle a number of matters on their own responsibility. We have seen good examples of vigorous intelligent concern for the welfare of students and the University as a whole. Anyone who thinks that present day students would or should meekly accept without comment all their elders decide is not living in the late 1960's; and he is badly underestimating capacities and responsibilities to be found in the younger university generation.

FACILITIES AND FUNDS

One important factor of university climate does depend on money. Chiefly through capital funds supplied by the Ontario government Carleton has been able so far to keep construction for academic purposes generally in pace with rapid growth, although there have been difficult periods of disruptions, and some faculty members have had to wait for laboratory space or use temporary offices. But we are falling badly behind in facilities which, although not strictly necessary for teaching, are extremely important for good university life. A union building; adequate space for meals and coffee sessions; reasonable gymnasium facilities; a large hall; more residences; a centre for graduate students; faculty common rooms or club—all urgently needed, and all blocked by lack of funds.

Last year the Ontario government adopted the policy of providing about 85 per cent of the funds needed for academic facilities it approves; the remaining 15 per cent has to be found by the university itself from private sources. For most of the kinds of facilities mentioned above the university has to furnish 50 per cent, or in some cases up to 100 per cent, of the cost from gifts. In the case of residences private money must cover a considerable proportion if rates to students sufficient to cover mortgage payment charges are not to be prohibitive.

Despite the generosity of those who have contributed this year to the Carleton University Campaign we can see no possibility of adding the seriously needed ancillary facilities under present government policies unless very substantial new private gifts come in. Furthermore, unless there is a change in government policy about capital funds in general, we shall be prevented from starting new academic construction for lack of the 15 per cent "seed money".

A considerable amount of construction did go ahead on the campus in 1965-66, most of it in anticipation of contributions to the Campaign. The E. W. R. Steacie Building for Chemistry was completed just in time for the start of term in September, and was formally inaugurated with a Special Convocation and opening ceremonies on October 22nd. After an agonizing delay caused by the construction strike last summer the new residences for men, Grenville House and Russell House were ready for occupancy by the start of the second term. The addition to the heating plant came in just ahead of winter. After early strike hold-ups, work on the new Physics building, the second phase of the C. J. Mackenzie Building for Engineering, and the two additional storeys of the H. S. Southam Hall went ahead well so that they would all be ready for September 1966. Unfortunately, complicated modifications to former chemistry space in the Tory Building for biology and geology proceeded at a discouraging rate. And after delays caused by slowness in our own internal planning and then in the architect's office the tender for the large Loeb Building for social sciences was finally let in March, with a completion date in late fall of 1967.

To outsiders unfamiliar with the necessary current growth rates of universities this may seem a good deal of construction. But it has only been just enough to keep up so far with the actual academic expansion needed to meet demands coming on Carleton. The prospects for the future, as they appear under the conditions now applying, are extremely worrying. The size of the problem is shown by the estimate that to take the number of qualified students seeking entrance in the near future Carleton will have to grow each year by the equivalent of a fair-sized college. The increase in enrolment for 1966-67, for example, will probably be greater than the total registration at Carleton just ten years ago. But unless there is a break in the log-jam of capital funds we shall have to start limiting registration decidedly in 1967-68, and still be short of needed facilities.

The whole capital fund situation in the province is far from simple. Presumably the Department of University Affairs put limits on the

proportion of approved projects that may be covered by government funds in order to encourage universities to seek private support and also to limit the requests. But this policy can lead to a complete stoppage of building by a university such as Carleton which is limited in the amount of private financial giving it can expect. For its part the Provincial Government, as Mr. Davis the Minister of University Affairs has pointed out, is very concerned about the total of over 800 million dollars estimated as needed for university expansion in Ontario over the next five years. They, in turn, are calling for Federal Government contributions to capital costs, and saying that such contributions should be on a scale better than the five dollars per head of population per year recommended in the Bladen Commission Report. Following the cancellation of the Federal-Provincial meeting originally scheduled for June to discuss questions of university financing there was a situation of great uncertainty at the end of the academic year.

During the last four years farsighted support of the Ontario government has made possible the remarkable development of universities in the province, both existing and new, and on both the graduate and undergraduate levels, enabling them so far in general to meet fully the rising demand for student places. But it is impossible to see how the needs of the next five years can be met unless there is a solution very soon to the capital funds question.

PROGRESS UNDER DIFFICULTY

In current financing Carleton had a bad year. As pointed out in this Report last year, the Provincial operating grant for 1965-66 was insufficient to cover essential needs, and seemed unfairly small in relation to amounts going to a number of other universities. We reflected rather bitterly, for example, on the fact that per-student, our grant was very substantially less than amounts going to institutions of higher learning in the Toronto area, although Carleton is carrying on a very sizeable amount of expensive graduate work.

In this situation the Board of Governors agreed that even though current income was deficient we simply had to make essential additions to staff and increase salaries somewhat, although quite inadequately. The result was a deficit for the year of \$180,820.09. Since Carleton has nothing that can be called reserves, this amount, added to the deficits we had been forced to run in some previous years, forms a sort of negative endowment, adding to problems of financing and increasing interest charges for current loans. It seems

hardly fair that Carleton at an important stage in its development should be put in such a position when one thinks of the size and amounts going to newer "emerging universities" compared to amounts to Carleton in the past when it was of comparable size.

Happily the situation looks decidedly better for 1966-67 since the Provincial Government has guaranteed a total of Federal and Provincial grants that will enable Carleton to make further necessary staff additions, to increase salaries more in line with other universities, and to accelerate the building of its book collection.

Thanks to the deficit, the University in 1965-66 still did add to its basic strength and stature. The number of full-time faculty members serving on the campus increased from 150 to 194, and once again we were very pleased with the quality of those recruited. The number of supporting staff was also increased appreciably.

Expansion of work at advanced levels was again more rapid proportionately than on the undergraduate side. The number of full-time graduate students rose from 213 to 264, part-time from 234 to 271. With the new Ph.D. program in Psychology, and the Master's programs authorized in Classics, Spanish, Geography and Materials Engineering, the University next year will be offering doctoral work in 13 major fields, and Master's in 24.

Full-time enrolment of 3,024 at December 1st was a little less than had been projected, but there were indications that the dip in the growth rate was temporary. By the end of June applications for admission to first year for 1966-67 were more than 50 per cent higher than at the same time twelve months ago. Registration in the summer session in 1965 was increased by 346; and of part-time students in the winter session by 407.

PREPARATION FOR UNIVERSITY

We are concerned, however, not just about the numbers of future students, but also about their academic preparation. It became definite during the year that the Department of Education was going to modify Grade XIII from a general five subject pattern to four subjects. Universities as well as others have been critical of work in Grade XIII as it has been carried on. The changes are designed to provide more flexibility in this year, and opportunities for deeper penetration and better intellectual preparation for university work. One by one the universities of the province agreed to move to admission requirements based on four subjects at the senior matriculation level. A number of us have misgivings. If the new pattern in Grade XIII just means that

entering students have a narrower foundation we shall have lost ground. If, on the other hand, hopes are met, and the new plan does truly make for a better intellectual preparation, there will be a gain. All university people earnestly hope the latter will be the case.

DEGREES

New holders of Carleton degrees at the Spring Convocation were led by Her Excellency Madame Vanier and Dean Vincent Bladen of the University of Toronto, who gave the Convocation Address. At the Special Convocation on October 22nd W. Albert Noyes, Jr. and Léo Marion received the honorary degree Doctor of Science. The total number of regular degrees conferred at Spring and Fall Convocations was: Doctor's—four; Master's—69; Bachelor's with honours—61; and Bachelor's—472.

CAMPAIGN

As made clear earlier it is still vital for universities to have private support, even if they are receiving substantial amounts of government money. Hence the importance of the campaign for funds that began in the fall. The University is deeply grateful to all those who have contributed or will contribute, and is immensely heartened by the number of friends it has found it has, both corporate and individual. Many national firms gave generously, but since there is comparatively little industry in Ottawa, Carleton has to make a special effort to seek help from private individuals. Altogether by the end of June some 496 firms and 6,443 different private persons had given or pledged contributions.

The University is also enormously grateful to over 900 men and women who worked in the Campaign soliciting or organizing the soliciting of gifts. The work of Mr. D. M. Coolican, chairman of the Campaign committee, who had to move from Ottawa at the beginning of the calendar year, was ably taken up by Mr. F. K. Venables who moved up as co-chairman. Assisting him was an able array of committee members, division heads, team captains and others who worked with great energy. No outside professional organization was called in, and the staff work was led by Mr. Michael Roberts, University Development Officer.

Phase I of the Campaign was completed at the end of June and \$1,914,967.99 had been collected or definitely pledged. Phase II of the Campaign commenced in the fall of 1966 and faces the challenge of bridging the gap between what has already been collected

and the \$3,000,000 goal which is so vital. A very encouraging aspect of the Campaign is the high proportion of members of the University itself, staff and students, who gave. Another was the superbly organized canvass and generous giving in the public service.

APPOINTMENTS

Mr. John Nicol, formerly of the University of Alberta at Calgary, was appointed Registrar in January. He succeeded Professor A. J. Earp who left just before this to become Vice-Chancellor of the University of Guyana, the second executive head of universities in developing countries to be chosen from Carleton within a few months. Another appointment was that of Mr. J. E. Whenham of Winnipeg as Director of the Physical Plant.

At the end of the year Professor John Porter finished his agreed term as Director of Division II of the Faculty of Arts and went on leave. Professor G. C. Merrill of the Department of Geography was appointed to succeed him with the title Associate Dean, Division II, Faculty of Arts. Mr. Norman Robertson took up his position as Director of the new School of International Affairs in January.

The new post of Director of Counselling and Health Services was created and Mr. Norman Fenn was persuaded to return to Carleton to fill it.

BOARD OF GOVERNORS

A man to whom Carleton owes a great debt completed a long term of great service when Judge C. C. Gibson retired as Chairman of the Board earlier in the year. Judge Gibson was one of the original group that founded Carleton College with Dr. Tory, and has been an active member of the Board of Governors ever since, serving for many years as Secretary, and then as Vice-Chairman. For the past three years he had been a wise and vigorous Chairman of the Board.

Another of the founding group to retire was Mr. W. M. Connor who had helped provide vital support in the early days, and who had maintained a warm and keen interest in the University. Retiring also were Mr. Charles Hulse a member for 15 years, Mr. Charles Gavsie, and Mr. Wilfrid Mavor.

Mr. David Golden, a member of the Board for five years, was appointed Chairman to succeed Judge Gibson. On completion of her term as a representative of the alumni Dr. Grace Maynard was elected a regular member of the Board. Mr. John Clarke was elected as a

nominee of the Alumni Association. Other new members were Mr. Louis Rasminsky and Mr. F. K. Venables.

A. D. DUNTON,
President and Vice-Chancellor

Faculty of Arts

Enrolment in the Faculty of Arts showed another substantial increase during 1965-66. A growth of approximately 13 per cent over the previous year kept pace with the general increase in new full-time students coming to Carleton. Approximately two-thirds of Carleton's students work in the Arts Faculty: 2,023 in 1965-66, to be precise. Roughly 75 per cent of this number pursue major or honours programs in the conventional Arts disciplines while the balance are to be found in the more applied fields provided within the Arts Faculty: Commerce, Journalism and Public Administration. The rapid increase in Carleton's student body and the vital place occupied by the Arts Faculty can be realized dramatically by noting that enrolment in Arts during the year under review was larger than for the entire University as recently as 1962-63.

A similar growth can be seen in the size of the faculty. In 1962-63 Arts faculty members numbered 73 while three years later this figure had climbed to 133. There has been a variety in the academic training and interests of the new faculty members which cannot help but enrich the educational experience of Carleton's students. Forty-eight per cent of the teachers appointed to the Faculty of Arts during the past three years have been Canadian-born, another 18 per cent have been born in the United States, 14 per cent in the United Kingdom, and 20 per cent in other countries. The analysis of this group according to the country in which the highest degree was taken produces somewhat different results. Thirty-four per cent of the new faculty members in Arts appointed since 1963 have taken their highest degree in the United States; 34 per cent in Canada; 21 per cent in Great Britain; and 10 per cent elsewhere.

These figures reveal the high degree of mobility in the scholarly world today. Although it is often claimed that Canada suffers through a "brain drain", it is not as often recognized that this country is also the recipient of numerous highly-trained academic people from the

United States, the United Kingdom, and to a lesser extent from other countries. Canada should be grateful for the contribution that these university persons have made to her educational system. The conditions which attracted them to Canada in the first place need to be preserved and even improved, for it must be recognized that the international competition in teachers and research workers is intensifying with every passing year. The analysis of new members of the Arts Faculty also shows the extent to which Canada has relied on other countries for advanced education in the humanities and social sciences. The fact that these countries can no longer be expected to produce scholars for Canadian institutions suggests that the recent steps taken to strengthen graduate studies in Arts in Canada are both timely and worthy of strong support.

Much attention was given in the Faculty of Arts and the Senate during the past year to the effects of sweeping changes in the composition of the Grade 13 year in Ontario. These changes arose from the Report of the Grade 13 Study Committee, 1964, which asked the universities to review their admission requirements with a view towards reducing the number of courses for admission in September, 1966.

Carleton admission requirements were carefully studied over the course of the year and at one point it was hoped that uniform requirements applicable to all faculties might be devised. However the desire of the faculties of Science and Engineering to require two experimental sciences could not be reconciled with the wish of the Arts Faculty to give more stress to languages and subjects such as History and Geography. Eventually separate admission requirements for each faculty were agreed upon. For Arts these requirements are to be: (a) English; (b) A language other than English; (c) and (d) Two options chosen from History, Geography, a second language, a science, or two areas of Mathematics.

Although separate faculty admission patterns might produce difficulties for students wishing to transfer from one faculty to another, it was hoped that special consideration might be given students with good records so that deficiencies would not prevent their admittance into the faculty of their choice. Carleton's new requirements for admission were in general agreement with those adopted by other Ontario universities.

The General and Advanced concept of instruction, as proposed in another Department of Education study committee report (1965), received a less favourable reception at Carleton. While the Arts

Faculty was generally sympathetic, recognizing the challenging nature of many of the new courses suggested, the Science Faculty found the General and Advanced Level courses unacceptable. The reasons for this rejection were found in the recognition that students would be forced to choose among Mathematics, the physical sciences and the natural sciences before they could have adequately sampled these disciplines. There was also a feeling that the General Level courses would be of little advantage to students hoping to enter Science except in a few special cases. Behind these specific objections lay the feeling on the part of many members of the University that the extensive reforms already introduced into Grade 13 suggested that it would be well to assess the results of these changes before embarking on further modifications in the Grade 13 curriculum. Carleton's misgivings were subsequently communicated to the Minister of Education and were found to be shared by most of the universities in the province.

The curriculum of the Faculty of Arts was extended into a new area during the year when it was decided to create a Department of Art. Under discussion for some years, the detailed planning of courses in this area was undertaken during the present session and the first appointment made to take effect in 1966-67. The new Department is not intended to provide training for practicing artists but will concentrate on instruction in the history and criticism of art. Any practical activity undertaken will be clearly subsidiary to these purposes. Thus the Department's offerings will happily complement teaching in the humanities given within the Faculty.

There were two important considerations in mind in establishing the Department of Art. One was to emphasize the relevance and importance of art to Carleton's goals as an institution of higher education. Although the history of art inevitably enters into many courses in history and the modern and classical languages, in past years there has been only sporadic attention to this area as an organized subject within the Carleton curriculum. The other objective was to provide, eventually, a major and even an Honours program within the field of art. A background in this area would be valuable for students planning professional training in art after graduation and would also be useful for those intending to teach art in the school system. At the beginning, the new Department will offer two courses in art history which can be taken as options by students majoring in other disciplines. Suitable and spacious quarters for the new Department have been arranged within the Loeb Building, now under construction.

A second extension of Arts offerings, to take effect in 1966-67, was the decision to offer a seminar at the Fourth Year Honours level in Comparative Literature. The new course, together with one to be provided later at the graduate level, arose from the initiative of the six departments of classical and modern languages. For 1966-67 the new interdepartmental seminar will discuss the concepts of "influence" and "source" in literary works drawn from a number of Western European languages.

Studies in comparative literature have become increasingly significant in contemporary university curricula. They afford a means of breaking down the walls within which the literature of particular countries has usually been studied. Literary movements can be seen in a broader perspective as international phenomena in which ideas flow from one country to another. The new field also offers an appropriate meeting ground for scholars interested in literary theory and technique—aspects of the subject which naturally overstep national or linguistic boundaries. An incidental benefit of courses in comparative literature is to allow some attention to be paid to the literature of countries whose language most universities are unable to teach. Scandinavian literature, as expressed by such international figures as Ibsen and Strindberg, is a good example of a literary development which has had to be left outside the curricula of many universities.

Important changes have also been made in the requirements for the Commerce degree which henceforth will be administered by a newly created School of Commerce. Conforming with the practice of most Canadian universities, new students who enrol in Commerce in the academic year 1966-67 will be expected to complete a four rather than a three year course of study. The four year program makes possible a widening and deepening of the curriculum and an opportunity to select from a variety of course patterns in accordance with individual predilections. Specifically the student will be given an opportunity to emphasize one of the following: Economics, Accounting and Finance, Quantitative Methods, or Labour and Industrial Relations. These four fields of concentration were selected because of their widespread relevance to economic and business affairs and the growing importance of their subject matter. Students coming from the new program who wish to proceed to graduate work in Business Administration will be better equipped to do so and those who wish to move directly into business, industry and government will have a wider knowledge on which to draw. For the benefit of part-time

students, courses will continue to be offered in the Evening Division but it has been decided that one academic year must be devoted to full-time study. The first Director of the School will be Professor H. E. English, who will be returning to Carleton after four years spent as Director of Research for the Private Planning Association and the Canadian Trade Committee, Montreal.

The Plaunt Lectures for 1965, delivered on 18 and 20 November, provided one of the principal topics of discussion in government and academic circles in Ottawa during the winter. This result, which fulfilled so happily the wishes of the donor of the lectureships, was achieved through the arresting presentation of Dr. James Eayrs, Professor of Political Economy at the University of Toronto. Professor Eayrs took as his theme the timeless problem of right and wrong in the conduct of foreign policy. He examined this subject from the vantage point of the serious student of international affairs who is also the citizen, obliged to bear the consequences of foreign policy decisions. All too often, the lecturer affirmed, these decisions have been lacking in moral content. Thus deceit and violence have come to permeate the environment of international politics. The only prospect of salvation lies in the criticism of the intellectual, provided that he remains entirely detached from the decision making process. To the professional diplomat there was little comfort in Professor Eayrs' diagnosis; to the soldier there was even less; while for the journalist and the academic specialist Professor Eayrs drew strict lines of constraint. Yet all those who heard the lectures or read them afterwards could unite in acknowledging the stimulus gained from the observation of an incisive mind probing, deftly and wittily, into the frightening incongruity of ethics and statecraft.

Three major series of evening public lectures were sponsored by Arts departments during the past year. Their purpose was either to explore important subjects that had not previously been discussed in Carleton extension lectures or to bring academic knowledge to bear on vital contemporary questions. In the first category lay a series of six lectures on leading American authors sponsored by the English Department to celebrate the establishment of a Master's degree program in American literature. The series, convened by Professor Marston LaFrance, brought together literary specialists from three American universities as well as Carleton and York University. The response given the lectures by students and the Ottawa public augurs well for the growth of a lively interest in American literature at Carleton. The energetic Soviet and East European Studies Committee ar-

ranged, for the third consecutive year, an eight-part lecture series beginning in January. On this occasion the lectures explored the relationship—ideological, diplomatic and economic—between the Communist states and the West. The series was concluded by an important address by the Hon. Paul Martin, delivered before a company that included the principal diplomatic representatives in Canada from the Communist countries. The large and enthusiastic audiences that have characterized these lecture series since their inception were again in evidence during the past year. The Economics Department took the initiative in arranging a series of six lectures to commemorate the twentieth anniversary of the White Paper on Employment and Income of 1945. Laymen and the Ottawa fraternity of economists gathered in large numbers to hear these lectures, which were both retrospective and analytical in approach. A seminar to discuss the topic of each lecture was held the following day and was attended by members of the Economics Department as well as invited economists from the departments of government in Ottawa. This meeting provided a suitable opportunity for a further exchange of views between the lecturer and specialists interested in his subject. It represented an innovation in the Carleton lecture program that might well be adopted for other series in the future. Visiting academic lecturers usually appear for tantalizingly brief periods; this device allows more benefits to be wrung from their fleeting presence.

The Psychology Department arranged a somewhat similar scheme through the medium of the Departmental Colloquia. Various authorities were brought to Ottawa to take part in seminars with staff and students and occasionally to provide a public lecture. The value to the members of the Department in thus being able to keep abreast of new developments in the expanding fields of Psychology has been far greater than the modest expenditure on the project would suggest. Professor P. D. McCormack acted as convenor of the Colloquia for the past year and attracted seven distinguished psychologists to Carleton, one from as far afield as the University of Texas.

A number of members of the Arts Faculty presented lectures on the television series "University of the Air" during the past year. Members of the History Department discussed the colonial period of North American History; a series of lectures on introductory psychology was given; a conversational French course was undertaken; there was a series on the history and government of the Soviet Union and another group of lectures on the ancient world. In spite of the unfortunate hour (7 a.m.) at which the lectures were presented,

the response was good and the venture will be continued. It would seem appropriate to suggest however, that television producers, if they are serious in their desire to present a platform for university lecturers, schedule these programs at more civilized hours. It will be generally conceded that it takes a strong devotion to learning to absorb a lecture on elementary psychology at 7 o'clock in the morning!

The following persons visited the University and the Faculty of Arts during the academic year, either as official guests or as occasional visiting lecturers. This list does not include others who came to Carleton to take part in major lecture series.

Professor and Mrs. W. H. Maze, Assistant Principal of the University of Sydney, Australia.

Sir William Hayter, Warden of New College, Oxford, was entertained at luncheon on 28 September, 1965. The Prime Minister was also a guest.

Sir Guy Powles, Ombudsman of New Zealand.

Dr. Richard Herbert Samuel, Professor of Germanic Languages at the University of Melbourne, Australia.

Professor Hans Bekker-Nielsen, Copenhagen, Visiting Professor at the Pontifical Institute for Mediaeval Studies of the University of Toronto.

Professor Arthur Montague, Professor of Spanish, Brock University.

Professor Robert Mandrou, Directeur d'Etudes, l'Ecole Pratique des Hautes Etudes, Paris.

It was possible again to increase the Faculty of Arts Research and Publications Fund for the year 1965-66. The sum allocated amounted to \$17,000. The increase was welcome, for the claims made upon the fund have undergone a steady growth with the expansion of the faculty. Fifty persons benefitted from the fund for a variety of projects. For example, grants were awarded for the purchase of a typewriter with a Greek keyboard, for the payment of research assistants in a project in urban economics, for photostating a rare edition of Bacon's *Essays*, for typing the memoirs of Xavier Marmier, the nineteenth century French novelist, for the recording of rural dialects in the Loire valley, for expenses connected with an expedition to the Yukon ice fields, for research in Spain on Unamuno and for other purposes as diversified as they are interesting. Normally the fund does not provide support for large projects or for extended periods of research or travel but exists to supplement grants from the Canada Council, the National Research Council and other agencies. In this

it performs a service far beyond that suggested by the size of the grants made. Since the fund is administered by the University, allocations can be made from it for an unrestricted list of purposes and in a most expeditious manner. In scholarly research, as in many other activities, a limited amount of assistance at a critical point is often more valuable than the indefinite prospect of larger support.

Four members of the Faculty won senior research fellowships from the Canada Council for study during sabbatical leaves. Another two won pre-doctoral fellowships which will be used for travel to research materials and for graduate study. Mr. Walter Herbert, a long-time special member of the Senate and a Sessional Lecturer in Journalism, was awarded an honorary doctor of law's degree by the University of Alberta in November. He was also awarded a Canada Council medal for distinguished service to the cause of the arts in Canada, an honour which brought delight to his associates at Carleton.

Our Arts undergraduates did not do as well in the competition for the Woodrow Wilson Fellowships as in past years but one award was secured by a graduating student in English. Forty-eight graduates going on to further study from the Arts Faculty were the recipients of awards from governments and universities. In some cases students with superior academic records were obliged to choose among several awards offered.

Activities in the cultural field were well supported in 1965-66. The Carleton Chamber Concerts series consisted of four events: the Alma Trio from the United States; Elizabeth Benson Guy, Canadian soprano accompanied by John Newmark; Nelli Shkolnikova, violin and Ljuba Edlina, piano from the U.S.S.R.; and Michel Debost, the French flautist, with Christian Ivaldi, piano. It was noted with satisfaction that students, encouraged perhaps by minimal admission charges, have come to constitute a larger segment of the invariably enthusiastic audiences than heretofore. The Carleton Choral Society under its new conductor, Mr. Brian Law, F.R.C.O., contributed to several University functions and offered a concert performance of Purcell's "Dido and Aeneas" assisted by the C.B.O. Studio Ensemble. This event was broadcast, as was a series of jazz concerts given under the joint sponsorship of the C.B.C. and the Student Cultural Committee.

Responsibility for art exhibitions in the foyer of the Tory Building was assumed this year by Mr. Duncan deKergommeaux. The exhibitions consisted of a collection of sculptures of seven Eastern Canadian artists, paintings by Roy Kiyooka and photographs by P. J.

Pocock. In each instance, the artists concerned visited the campus and discussed their work. A travelling exhibit of paintings and drawings by older masters was also displayed at Carleton under the heading of "Exhibit 21".

The year was a good one for theatre on the campus. The scope and variety of dramatic productions confirmed again a lively theatrical talent and interest among a wide group of Carleton students. The first production in September was the Frosh Review, *Gibble Gabble*. Directed by Robert Lackenbauer, this proved to be a farrago of sketches cleverly adapted for the stage from a series of Jules Feiffer cartoons. Later in the term, as part of a new program of noon hour "instant" theatre, the Sock and Buskin Club presented two original plays by Carleton students: *Goebbels' Gobbledygook* by Laurence Kardish and *File Under Futility* by Nika Rylski. *Goebbels' Gobbledygook*, in particular, enjoyed distinguished and protracted success. Directed with great invention by John Palmer, this satiric fantasy was Carleton's entry in the C.U.D.L. festival at Toronto where it won top honours and three individual awards: Best Canadian Play, Best Production, Best Direction. Subsequently it was staged at the Colonnade Theatre in Toronto, at the Yale Drama Festival, and finally at Le Hibou in Ottawa. Carleton's reputation as a spawning ground for Canadian dramatists continues to flourish.

Two full length productions with large casts highlighted the winter term. The first, an exuberant presentation in French of *Le Bourgeois gentilhomme* was directed by Miss Madeleine Gobeil of the French Department and played one night to a packed and enthusiastic house. The second, a production in March of Arthur Miller's *The Crucible*, was staged by the faculty supervisor of drama, Michael Tait, who also holds an appointment in the English Department. This demanding play, in which Guy Bannerman, a Stratford apprentice, took the leading role, showed authority and conviction. It made a strong impression on all those who saw it.

Expanded plans for productions in both French and English, the continuing activity of student playwrights, and some useful improvements in the stage facilities of the Alumni Theatre, promise an even stronger dramatic program at Carleton in the Centenary year.

The report on activities within the Faculty of Arts during 1965-66 cannot close without some mention of the loss of two respected and senior members of the Faculty. H. Scott Gordon, Professor of Economics, resigned as of 30 June, 1966 to join the University of Indiana where in the Victorian Studies Center he will be able to pursue his

interest in nineteenth century economic and political thought. One of the first full-time members of the Department of Economics (which he joined in 1948) Professor Gordon was its chairman for many years and one of the early architects of the Commerce curriculum at Carleton. In the wider setting his stimulating lectures and articulate contributions to academic discussion will be greatly missed by students and colleagues in the years ahead.

It will come as a surprise to many to learn that Wilfrid Eggleston, Professor of Journalism and the first Director of the School, has reached retirement age. Although he will continue as Emeritus Professor and Sessional Lecturer in Journalism, Professor Eggleston now desires more time for writing and travel. As one of the few members of the Carleton faculty who have taught continuously ever since Carleton College's beginnings in 1942, Wilfrid Eggleston has contributed immeasurably to the present stature of Carleton and to the worth of the Journalism program. His enthusiasm and broad experience, his devotion to the central disciplines of knowledge, and his humanity have combined to make him an ideal creator of the course in Journalism at Carleton. His retirement, in the twenty-fourth year of the University's history, marks the end of a distinct phase in Carleton's life. It is good to know that he is being succeeded as Director of the School by one of his own former students and that he will continue to lend his support to the teaching in Journalism. All members of the Faculty, old and new, will wish him well in a retirement which cannot be anything but vigorous and productive.

D. M. L. FARR,
Director, Division I, and
Dean, Faculty of Arts

JOHN PORTER,
Director, Division II

Faculty of Science

While we admit that the crowning glory of any academic institution is that devoted band of scholars who set the tone of the research program and who mould the curricular pattern of studies, we must, nonetheless, frankly admit that if the modern scientist is to extend the boundaries of knowledge and remain viable in a highly competitive world, he must have well-equipped laboratories with the most modern gadgetry and technical personnel to assist him.

Since moving to this campus, the various departments of the Faculty of Science have grown so rapidly that more adequate teaching and research laboratories had to be found. For various technical reasons, we decided that the Department of Chemistry should be the first to leave the H. M. Tory Building for Science. After two years of careful planning, a building dedicated to the memory of the late Dr. E. W. R. Steacie was begun in 1963. In the fall of 1965 the Department moved into its new laboratories. This building, designed by Mr. C. J. Menendez of the Architectural Associates of Carleton University, has an area of 106,000 square feet and contains 13 undergraduate and 12 graduate research laboratories, classrooms, and a 150-seat Lecture Theatre. The entire building is air conditioned, with small areas having separate temperature and humidity control. It is so constructed that the undergraduate laboratories, each of which accommodates 24 students, are in pairs, with storerooms and balance rooms between them. In the research areas, every effort has been made to design a building that will be flexible, allow for expansion and for easy conversion to the changing needs of an experimental science.

With the departure of the Department of Chemistry from the Tory Building, the space so freed has been converted into new teaching and research laboratories for the Departments of Biology and Geology. As in the Steacie Building, great emphasis has been placed upon efficiency in the teaching areas and flexibility in the areas devoted to research.

The Department of Physics too has been planning and guiding the construction of a new building, which they hope to move into in the fall of 1966. The "Dynamitron" 3 MeV nuclear accelerator that was given jointly to Carleton University and the University of Ottawa by the National Research Council was delivered in May of this year and is being assembled in the joint University of Ottawa-Carleton Accelerator Laboratory at the University of Ottawa.

In the past, this Report has outlined in some considerable detail the research activities of individual departments. As these activities have not materially changed over the last few years and, as we are in a transitional phase when so many new members of staff are being added, it would be better to refer the reader to the research papers listed elsewhere in this volume. The members of each department are carrying on an extensive research program and in every department certain areas have been chosen for advanced study and research, recognizing that, as research is expensive, we have to concentrate our efforts in those areas where we can make the greatest contributions.

Turning to the strictly teaching aspects of the Faculty, greater effort has been made to prepare adequately the increasing numbers of students that are coming to the University. In the introductory course in Mathematics, educational television was used for the first time in this institution with a considerable degree of success. In our experiment, a small class was with the instructor, and monitors were placed in the receiving rooms to relay questions to the instructor and to continue with the discussion groups that followed the lecture. As a result of our experience in the Department of Mathematics, the University has decided to extend its work in television and plans to use it next year as a means of demonstration in the introductory Biology laboratories.

At the time of the formal opening of the E. W. R. Steacie Building, commemorative lectures in honour of Dr. Steacie were delivered by Dr. Paul De Mayo of the University of Western Ontario; Dr. Léo Marion of the University of Ottawa; Dr. W. Albert Noyes, Jr., Professor of Chemistry, University of Texas; and Dr. J. C. Polanyi of the University of Toronto. The Faculty also had as guests during the year Professor J. Dainty of the University of East Anglia; Professor P. I. Dee of the University of Glasgow, who delivered the Rutherford Memorial Lecture in October; Professor Ernst Mayr, Director of the Museum of Comparative Zoology of Harvard University; Dr. E. I. Semenov, head of the Mineralogical Laboratory of the Soviet Academy of Science Institute for the Mineralogy and

Geology of Rare Elements; and Dr. M. H. Tupas, Director and Co-Manager of the United Nations Special Fund Assisted Project, University of the Philippines.

In addition, the members of the Faculty of Science took advantage of the large number of visiting scientists who pass through Ottawa to visit the National Research Council and other departments of government. Many of these were invited to give seminars to the different departments and to comment on their research activities.

H. H. J. NESBITT,
Dean, Faculty of Science

Faculty of Engineering

In previous annual reports for the Faculty of Engineering attention was devoted, primarily, to the development of our curriculum and facilities and the growth in the numbers of our faculty and students. While our growth and development, in numbers and areas, during the past year was again substantial it would be appropriate, I believe, to focus our attention in this report to some of the areas of investigation, research and studies of the faculty members.

Professor George is investigating methods of increasing the data transmission rates in digital communication systems. This is a co-operative study with the Defence Research Telecommunications Laboratory and involves both theoretical and experimental studies. The investigation is progressing in three major directions: the ultimate capabilities of such systems are being determined, the effectiveness of simple economic systems is being evaluated and effective adaptive procedures are being developed so that the systems will automatically respond to changes in the communications channel.

The Energy Conversion Laboratory, under the direction of Professor Cormack, was expanded to the graduate level with the opening of a research laboratory devoted to magnetoplasma dynamics. The equipment in this laboratory consists of a 60,000 joule capacitor bank, high speed oscilloscopes, a camera for sub-microsecond photography and an electromagnetic shock tube. Experiments under way include a study of energy losses in current carrying sheathes—a subject of major interest for the successful development of magnetoplasma-dynamic power generators. Electromagnetic acceleration of solids and liquids is also being studied, the objectives being the development of improved casting techniques and of a practical electromagnetic gun. Students working in this laboratory have interests in one or more of the fields of thermodynamics, instrumentation, circuit design, electromagnetics and fluid dynamics and, of course, plasmas—the name which we ascribe to gases that are at a high enough temperature

to act as conductors of electricity. The shock tube was designed and built during the past year. A significant contribution, of interest to other workers in the area of plasma research, has been made by A. D. Miller, working under Professor Cormack's direction. He has devised a technique, using realizable negative inductance and computer simulation, for maximizing the pulse obtained from an artificial transmission line capacitor discharge circuit. During the past year, Professor Cormack has also devoted some attention to high speed impact phenomena and to the electromagnetic problems associated with high frequency transmission lines.

The fluid flow patterns set up by a rotating disk represent one of the numerous interesting studies in fluid mechanics and in the design of turbomachinery. The flow patterns influence the geometry of the main flow passages as well as the bearing loads and cooling of the turbine disks. To date only the simplest configurations have been studied and, as a result, there is a dearth of information on many of the most significant features of these flows. On a test facility that was designed and calibrated under Professor Millar's supervision, the flow produced by the combined action of a rotating disk and a forced radial outflow of air has been studied visually and by pressure measurements. These studies have shown that, as expected, the steady flow due to the disk alone is altered quite significantly when a simulated cooling flow is introduced. An unsteady flow phenomena was discovered, which has not been reported before, and is now being investigated with hot-wire anemometers, a spectrum analyzer, and stroboscopic photography in an attempt to define its nature and cause. Another, and related, fluid flow phenomena which is inadequately understood is that of helical flow in the annular space between concentric cylindrical or conical surfaces, especially when one or both of the surfaces is in rotation. Analytical and experimental studies by Professor Millar are now under way to discover why such flows become unstable and tend to separate from the wall.

In the area of material science, Professor Goldak's high power density electron beam system will be operational within the next few months. This apparatus, currently under fabrication and assembly, is capable of directing a beam of electrons into an area of less than a millionth of a square inch. The material under the beam will evaporate leaving a hole as small as one thousandth of an inch in diameter. If the beam is deflected or moved a groove or slot can be machined. The apparatus will enable a study of the possibility of machining miniature electronic devices.

While the electron beam striking a metal target produces x-rays which are a health hazard in machining and welding applications, it is an ideal x-ray source for fluoroscope and diffraction studies. The electron beam system is the basis of a new medical fluoroscope design that promises to reduce the radiation dose to the patient by a factor of a thousand. This technique is expected to provide fluoroscopic data that was previously inaccessible, for example, x-ray motion pictures of a patient.

Professor Copeland's research activities are associated with two projects: experimental studies on electrical materials and the development of an ability to modify, control and optimize the behaviour of electrical devices by manipulating the properties of the constituent electrical materials as well as by varying other design parameters. Currently his study is mainly associated with magnetic materials. His aim, however, is to broaden and generalize this investigation to other electrical properties and applications of materials. The present task comprises the assembly of an apparatus capable of performing accurate magnetic measurements and studies on the hysteresis machine which uses permanent magnet material in the rotor. The first adequate theoretical model for the hysteresis machine has been developed and a co-operative program has been arranged with an American manufacturer of permanent magnet materials to supply special hysteresis rotors for the Mawdsley Generalized machine. The aim of the study is to determine whether a hysteresis machine can be economically competitive in much larger sizes than those currently in production. The studies also include the use of silicon-controlled rectifiers in the speed control of DC machines. During the past year Professor Copeland has also investigated some special applications of magnetic reed relays and magnetic memories.

Large areas of Canada and other parts of the world are overlain by muskeg or organic terrain consisting of a living organic mat of fibrous material overlying an extremely compressible mixture of partly disintegrated and decomposed organic matter. In many cases it is not feasible to by-pass developments in these areas and the removal of this material can represent a considerable proportion of the total construction costs. Since only a relatively small amount of data is available on the structural behaviour of muskegs, Professor Forrest has started a study of this problem. The study is being carried out in conjunction with the soils section of the National Research Council's Division of Building Research. The aim of the study is to investigate the magnitude and rates of deformation occurring under

field loading conditions. The results of one dimensional and triaxial laboratory consolidation tests, utilizing both one dimensional and radial drainage, will be used in conjunction with the data secured from field tests. This study will attempt to consider fundamental parameters and will contribute, hopefully, toward a better understanding of the behaviour of peat under applied loads.

A long term highway materials research program combining both laboratory and field studies was initiated by Professor Haas. The first efforts are concerned with the design of asbestos-modified asphalt mixtures utilizing the concepts of the Mohr strength theory and the shear strength parameters cohesion and angle of internal friction. The development of the Highway Materials Laboratory and the acquisition of new equipment has enabled him to expand this research toward the ancillary consideration of durability of bituminous mixtures.

It has become apparent that pedestrian circulation through the University's tunnel system leads to congestion problems at certain points and at certain class change periods. It has also become apparent that the problem could be accentuated markedly with future development and increased enrolment unless satisfactory design criteria are developed. To examine this problem, Professor Haas initiated an analysis of the flow patterns using some of the concepts of conventional traffic flow theory.

Professor Bigg has initiated a study on the use of matrix methods in the analysis of shells and shell like structures. The aim of the study is to provide methods of stress analysis for a wide range of shell problems—in particular, the problems associated with asymmetric load configurations.

During the past year Professor Wright completed a study on the development of a method for a detailed analysis of multi-storey rigid steel building frames subject to sidesway. The method provides for three conditions to be satisfied: the internal forces in the frame must be in equilibrium with the external forces on the deflected frame, the curvature of each portion of each member must satisfy the appropriate non-linear moment-thrust-curvature relationship, and the distortions of all parts of the structure must satisfy the condition of continuity of the structure. The analysis, which has been programmed for computer solution, was obtained by a series of successive approximations and a special technique was developed to make the analysis possible at the condition of maximum resistance of the frame and in the early stages of instability of a structure.

In response to a request from the Royal Canadian Mounted Police

for assistance in training selected members of the force in the use of engineering techniques for police investigations, Professors Bowes and Haas made an extensive study of the present methods used by law enforcement agencies and concluded that there is a need for improvement in the methods used even by the most progressive police forces. The methods commonly used by professional surveyors were modified for police work and presented to a group of RCMP constables on a pilot-project basis in an intensive two-week course. The course was judged to be very successful by the immediate response of those participating and by the subsequent work in actual investigations. The RCMP Administration requested that the course be repeated and has indicated that all personnel engaged in this type of work would ultimately be sent to Carleton for the course. They also agreed to an expansion of the course from two to three weeks.

The Engineers in the Ottawa area, through a committee of the professional societies, requested that the Engineering Faculty offer professional updating courses. Since many practising engineers have been unable to keep up with the development of computer applications and with the changes in applied mathematics that have resulted from the availability of computers, Professor Bowes adapted Engineering 265 to the requirements of practicing engineers and offered it as part of a course which was attended by 60 engineers. A survey of those participating indicated that the course satisfied a very great need and further surveys have indicated that the course could be offered annually for many years and be repeatedly oversubscribed.

The IBM 1620 Data Processing System, purchased by the University in 1961, was augmented by punched card equipment in 1962 and by additional core memory, disc files and an on-line high speed line printer in 1964 to meet growing demands for computing service. These demands, in 1965, amounted to over 400 hours per month of machine time. Forecast growth for 1966 and 1967 indicated that it would be reasonable and economical for the University to establish a Computing and Data Processing Centre based on a faster, higher capacity machine from the class of medium size computers. The Computing Policy Committee and, later, the University Senate accepted a report prepared by Professor Gullen recommending the establishment of such a centre, as an autonomous body separate from academic and administrative departments, to assume responsibility for the computing and data processing needs of the University community.

The President authorized invitations to tender, in April, to eight suppliers of computing machinery. On the basis of tenders received

from four suppliers a sub-committee of the Computing Policy Committee, chaired by Professor Gullen, recommended acceptance of a General Electric 415 system for a minimum rental period of 19 months effective from 1 April, 1967. This system has a memory capacity some four times that of the 1620 and an internal speed greater by some two or three orders of magnitude. The 1620 will be retained indefinitely but will be relegated to a teaching function and open-shop operation by undergraduate and graduate students. It is expected that, late in 1968, the University will wish to review its computing machinery holdings in the light of multiprogramming and teleprocessing equipment which is expected to become available at that time.

In the presentation of any report it is usually desirable to be selective and this report is no exception. In the selection of the activities described in this report I have made an attempt to provide an index of both the diversity and depth of the investigations and studies which have been initiated or completed by the Faculty of Engineering during the past year.

JOHN RUPTASH,
Dean, Faculty of Engineering

Faculty of Graduate Studies

REPORT OF THE DEAN

Apart from the approval of some new programs, described below, there were no structural changes in this Faculty during 1965-66. The enrolment continued to increase at the expected rate, as shown in the table on page 37.

A matter of great interest and far-reaching importance was the appointment of a Commission to study the development of graduate programs in Ontario universities, which was sponsored jointly by the Ontario Government Committee on University Affairs and the Committee of Presidents of the Ontario Universities. The Commission is chaired by Dr. John Spinks, with Dr. Gustave Arlt and Dr. Kenneth Hare as members and Mr. George Michie as secretary. Early in the winter we were visited by the full Commission, which devoted a day to discussions with the president, deans and faculty members of Carleton. The talks ranged over our capabilities for graduate work in various fields, our needs for library, equipment and research funds, the resources we could draw on in the capital area, and the most suitable programs to offer. Briefs were invited from any departments with a special point of view to present. Later in the winter the discussions were continued in a visit by Dr. Hare, and during the summer more detailed forecasts to 1975 were submitted. At all times we were most pleasantly impressed by the manner in which the Commission was carrying out its duties.

There were altogether 17 Diplomas, 69 Master's degrees and four Doctorates awarded in 1965-66. In French and in Civil Engineering the first Master's degrees were awarded, and in Geology and in Electrical Engineering the first Doctorates.

New programs in Geography, Spanish, and Materials Engineering were approved for initiation in 1966. The program in Geography will take advantage of the special research facilities in the Ottawa area, and will enable students to work towards the Master's degree

in a variety of geographical fields, including glaciology, geomorphology, historical geography, and land-use analysis. The program in Spanish will be carefully balanced between European and American fields. In Materials Engineering, a program of study and research in synthetic materials will be developed in active collaboration with government and industry in Ottawa.

In addition, the first steps were taken towards establishing a program in Comparative Literature. Some courses will be offered, but pending full development the students will proceed to their degrees through existing language departments.

Most of the fully qualified graduate students received sufficient financial aid to cover their basic living expenses. The principal sources were the Province of Ontario Graduate Fellowships and the National Research Council awards. These, together with the Carleton University Teaching Fellowships, were increased in number in accordance with the enrolment. Special mention should be made of the new procedure adopted by the National Research Council, under which 10 Bursaries for the coming year were awarded on Carleton recommendation.

There were also two post-doctoral fellowships held at Carleton this year, as detailed on page 38. Both these fellowships were provided by the National Research Council.

M. S. MACPHAIL,
Dean, Faculty of Graduate Studies

SCHOOL OF PUBLIC ADMINISTRATION

There were 18 full-time and 35 part-time students registered in the Master's program in Public Administration, six of whom were admitted in the fall of 1965. There were 12 full-time and 69 part-time Graduate Diploma students, 28 of them newly admitted. There were 46 students formally registered in the Certificate in Public Service Studies program, and an additional 63 Special students were taking courses to meet the entrance requirements. During the year, 15 M.A. degrees were conferred, and 17 Graduate Diplomas in Public Administration and 18 Certificates in Public Service Studies were awarded.

In the past year, the Special Course in Public Administration for Colombo Plan students, under the direction of Professor A. M. Willms, had 37 members who came from 19 different countries.

Professor T. N. Brewis of the Department of Economics provided a special course in Economics for this group, and Professor R. J. Jackson took them in the introductory Political Science course. Professor Willms gave them instruction in Public Administration.

In the summer of 1966 we repeated a 12-week Summer School course for senior administrators from Colombo Plan countries, sponsored by the External Aid Office. There were 27 students from 19 countries in this group. Mr. P. J. Fitzpatrick was in charge of the course. We are grateful to the many members of the Public Service of Canada who have assisted in this training program under the Colombo Plan. Some of them have given individual lectures in their special fields; others have been most hospitable in receiving the students in their departments. We extend our thanks also to members of other departments of the University who have co-operated in providing this program.

R. O. MACFARLANE,
Director, School of Public Administration

THE INSTITUTE OF CANADIAN STUDIES

There were 22 students enrolled for the M.A. program in 1965-66. Six degrees were awarded at the Spring Convocation, and five more may be awarded in the fall of 1966. The sudden rise in the number of graduates—there was only one in 1964-65, and altogether only four until this year—perhaps reflects an improvement in the calibre of the students. It owes more to the introduction of a five-course program, with no thesis; five of the six graduates followed that program. The improvement in the calibre of the students is nevertheless real, and three of this year's full-time candidates are proceeding to doctoral programs in Political Science or History.

A critical question is the establishment of an inter-disciplinary seminar as a core of the M.A. program. With Professor Robert L. McDougall returning as Director, and with an historian, Mr. B. C. Bickerton as Assistant Director, the Institute will have a nucleus of two departments on which to base such a seminar. Since the co-operation of two more departments is probably a minimum necessity, the seminar can hardly be offered on a sound basis until 1967-68. In the meantime, the club formed this year by the students themselves will help to provide some cohesion in the Institute.

A group of students from the Canadian Studies program at the

University of Vermont made what has become their annual visit to the Carleton campus. Students in Political Science from Principia College, Ohio, also visited Carleton. There were two Visiting Fellows in the Institute during the spring term: Mr. Douglas Fisher, beginning his retirement from politics to academic life, and the distinguished anthropologist Dr. Diamond Jenness. Neither gave formal public lectures, but both were extremely helpful to students.

Two faculty members visited the American Studies Department at Yale University, and found the visit most helpful. Professor Pearson, Chairman of the American Studies Department, was kind enough to undertake a very thorough and perceptive review of the Institute's program. He suggested more emphasis on the undergraduate honours program, and his most specific and pressing advice was that the M.A. in Canadian Studies should be made a two-year program. As there is a trend for students to enter by the qualifying graduate year, it is likely that the program will develop along the line of Professor Pearson's advice.

The Editorial Board of the Institute, with Dean Farr acting as general editor, has brought the number of volumes in the *Carleton Library* series up to 30. Six new volumes were issued, one of them a new compilation, with two further new compilations announced for the fall of 1966. A "Confederation package" of six volumes is in preparation and there are another 14 volumes being considered for publication over the next two years. There is nothing further to add, so far, to last year's report on the prospect of bringing out new volumes of the series in larger editions, at lower prices.

The *Carleton Library* is self-sustaining and the Institute's teaching program faces no unusual financial crisis. In the long run, the justification for the Institute's existence depends upon the fulfillment of its hopes to conduct or co-ordinate programs of research. They are still only hopes, and must remain so until money can be found. Dean Farr, pursuing Professor McDougall's proposal of last year, has drafted a brief and sent it to likely foundations. We may hope that some of these seeds will sprout vigorously.

S. R. MEALING,

Director, The Institute of Canadian Studies

GRADUATE ENROLMENT, DAY AND EVENING DIVISION 1965-66

	Day	Evening	Total
D.P.A.	12	64	76
M.A.	113	95	208
M.SC.	46	9	55
M.ENG.	21	59	80
PH.D	39	13	52
Special ¹	37a	41b	78
Total	268	281	549
Total (1964-65)	213	294	507

¹a: Colombo Plan Students

b: Faculty of Engineering

FELLOWSHIP HOLDERS 1965-66

University Teaching Fellowships

Campbell, Margaret Mary, M.B., CH.B., St. Andrew's	Psychology
Cohen, Daniel, M.SC., Adelaide	Biology
Dass, A. S., M.SC., Calcutta	Geology
Demayo, Adrian, Degree of Engineer, Bucharest	Chemistry
Dixson, Maurice, B.A., Swansea	Political Science
Dyck, Rand, B.A., Alberta	Political Science
Fitzpatrick, P. J., M.A., Western	Political Science
Hurd, Margaret, B.A., Hull	Mathematics
Irwin, W. W., B.ENG., Carleton	Engineering
Javaid, M. Y. M.SC., Panjab	Biology
Kagwade, V. N., M.SC., Bombay	Biology
Kamaluddin, K. A. M., B.SC., East Pakistan	Engineering
Kennedy, J. P., B.SC., Hull	Public Administration
Kitchin, Muriel, B.A., Carleton	Psychology
Kumar, Ashok, B.SC., Birla	Engineering
Kuruvilla, P. K., M.A., Carleton	Political Science
Lee, Cheng-ming, B.SC., Taiwan	Mathematics
Marathe, M. S., M.ENG., Carleton	Engineering
Martin, Jane, B.A., Bishop's	Canadian Studies
Matthews, Elizabeth A., B.A., Windsor	History
Sarma, V. S. K., M.SC., Andhra	Physics
Sharah, Abul, B.SC., Karachi, M.ENG., Tokyo	Engineering
Smith, C. William, B.ENG., Carleton	Engineering
Stalker, M. Anne, B.A., McGill	Canadian Studies
Waterman, Jennifer, B.A. Keele	English
Wong, W. H., B.SC., Tien-Tsin	Chemistry
Westmacott, Martin, B.A., Alberta	Political Science
Wright, Laurie S., B.SC., Queen's	Physics
Yang, A. I. C., B.SC., Taiwan	Chemistry

PUBLIC ADMINISTRATION SCHOLARSHIPS

Aziz, A. R., B.A., Punjab, Grad. Dip. P.A., London

Busing, T. H., B.Sc., D.P.A., Carleton

Matte, P. M., B.A., Laval, B.A. Hons. R.M.C.

Doern, Bruce, B.COMM., Manitoba

Melnyk, R. P., B.A., McGill

Wilson, V. S., B.Sc., British Columbia, D.P.A., Carleton

In addition there were 12 tuition scholarships for part-time students.

POST-DOCTORAL FELLOWS

Biology

Mia, Abdul Jabbar, B.Sc., M.Sc., Dacca, PH.D., North Carolina—National Research Council Fellowship—Fine structure and deposition of secondary cell walls in plants

Chemistry

Rozwadowska, Maria Danuta, M.Sc., PH.D., Poznan—National Research Council Fellowship—The investigation and structure on alkaloids from red poppy, *Papaver Rhoeas*, *Rhoeadine* and *Rhoeagenine*

THESES COMPLETED AND POST-GRADUATE DEGREES AWARDED NOVEMBER, 1965, AND MAY, 1966

Doctor of Philosophy

GEOLOGY

Fox, Peter Edward, M.Sc., Queen's—The Petrology of the Adamant Pluton, British Columbia

Jambor, John Leslie, B.A., M.Sc., British Columbia—Sulfosalts from Madoc, Ontario

ENGINEERING (ELECTRICAL)

Coll, David Clarence, B.ENG., M.ENG., McGill—A System for the Optimum Utilization of Pulse Communication Channels

PHYSICS

Kelly, Paul James, B.Sc., Sir George Williams—Studies of the Electrical Energy Storage and Loss Mechanisms in Aluminum Oxide

Master of Arts

CANADIAN STUDIES

Boswell, Marianne Joan, B.A., New Brunswick—Degree by course work

Bright, Richard Dale, B.A., Rutgers—Degree by course work

Burke, Frank Edward, B.A., Windsor—Degree by course work

Devlin, John Terrance, B.A., Windsor—Degree by course work

Kendall, John Charles, B.A., Carleton—Degree by course work

Lumsden, Susan Isobel, B.A., Bishop's—Joseph Howe, Editor the Nova Scotian

Morin, Dorothy, B.A., Carleton—Degree by course work

ECONOMICS

Kerton, Robert R., B.COM., Toronto—Factor Adjustment and the Economic Growth of the Atlantic Region

ENGLISH

Batts, John Stuart, B.A., Wales—Aspects of Kilvert's Diary

Haines, Victor Yelverton, B.A., Queen's—Introduction to Prosody with Notes on W. H. Auden's Prosody

Lyons, Roberta, B.A., Alberta—Jewish Poets from Montreal: Concepts of History in the Poetry of A. M. Klein, Irving Layton, and Leonard Cohen

Moore, Nathan, B.A., Rockford College—The Literary Friendship of John Ruskin (1819-1900) and Charles Eliot Norton (1827-1908)

Morrison, William Nathan, B.A., Sir George Williams—William Morris and the Ideal Society

FRENCH

Disher, Beverly, B.A., McMaster—Degree by course work

HISTORY

Cowan, Alan Wood, B.A., Toronto—The Canadian White Pine Trade with the United Kingdom, 1867-1914

Griezic, Foster Julien Kenneth, B.A., Waterloo—The Political Career of John Hilliard Cameron

Jashanmal, Bhagwan, B.A., Carleton—An Introduction to the Early History of Christianity in Malabar: from the Time of St. Thomas the Apostle up to the Arrival of the Portuguese

Miquelon, Dale Bernard, B.A., Alberta—The Baby Family in the Trade of Canada 1750-1820

POLITICAL SCIENCE

Dixon, Maurice Christopher Scott, B.A., Swansea—Hobbes and Thucydides: Examination of History in Leviathon

Mentzel, Jorg-Peter, Freie Universität, Berlin—West Germany's Approach to Reunification

Morgan, Hywel Rhys, B.A., Manchester—Khrushchev's Military Aid Programmes to Non-communist States in Asia

Noble, Howat Pearson, B.A., R.M.C.—Membership Participation and Political Organization: A Study of the New Democratic Party in Five Provincial Ridings in the Inter-election Period 1963-65

Shea-Desrosiers, Maureen, B.A., Ottawa—The Political Thought of Christopher Dawson

Webb, John Seaman, B.A., Alberta, D.P.A., Carleton—Maintenance of Low Level Deterrence: The Strategy of Escalation

Westmacott, Martin William, B.A., Alberta—Concepts of Federalism 1864, 1964: Some Aspects Compared

Whittington, Michael Stephen, B.A., Carleton—Grievance Procedures in the Canadian Civil Service

PSYCHOLOGY

Kitchin, Muriel, B.A., Carleton—Binocular and monocular tachistoscopic recognition of alphabetical material

PUBLIC ADMINISTRATION

Arthur, Charles Douglas, B.A., British Columbia—The Canadian Manufacturers' Association as an Interest Group

Aziz, Aziz-ur-Rahman, B.A., Punjab University, Diploma in Public Admin., London—Degree by course work

Busing, Thomas Herbert, B.Sc., D.P.A., Carleton—Some Aspects of Parliamentary Reform

Dubnie, Amil, B.A.Sc., British Columbia, D.P.A., Carleton—Organization, Administration and Performance on Research Activities in Two Governmental Research Bodies, 1937-1962

Forbes, Urias, B.A., Univ. of West Indies, D.P.A., Carleton—Some Aspects of Industrial Relations in Trinidad and Tobago: with special reference to the Industrial Specialization Act, 1965

Fowlow, Frederick Robert, B.Com., Queen's, Diploma in Bus. Admin., Western—The Development of the Plan for Integration of the Canadian Defence Supply Systems

Gabora, Herbert Nestor, B.A., Alberta, Dip. in Bus., Sask.—Collective Bargaining in the Saskatchewan Public Service

Hill, Kenneth George Anthony, B.Sc., London, U.W.I.—The Industrial Development Bank of Jamaica

Hossain, Ekhrum, B.A., M.A., Dacca—Degree by course work

MacLean, Roderick Duncan, B.A., St. Francis Xavier, M.A., Queen's—Degree by course work

Olivero, Robert John, B.A., Memorial—Management Information Services: an organizational theory and approach to the design of information processing systems in large-scale organizations

Padilla, Perfecto L., A.B., Far Eastern Univ., Univ. of Philippines—Organization and Methods Practices in the Government of Canada and the Philippines: A Comparative Study

Skerrett, Donald Kenneth, B.A., McMaster—The Ontario Public Services Grievance Board

Steiner, Hillel, B.A., Toronto—Degree by course work

Stewart, Robert Charles, B.Ed., B.A., Saskatchewan, M.Ed., Alberta—Degree by course work

SOCIOLOGY

White, Enid Geraldine, B.Sc., London School of Economics—Career Plans and Academic Recruitment: A Study of Graduate Students

Master of Science

BIOLOGY

Hicks, Gary Stanton, B.Sc., Carleton—The effects of synthetic growth regulators on cell expansion and cell division in Jerusalem artichoke tuber tissue

CHEMISTRY

Vasudev, Pathiyil, B.Sc., Madras—Nuclear Recoil Reactions in Cyclopentadienyl Manganese Tricarbonyl

GEOLOGY

Carter, Maurice Wylde, B.Sc., London—A Preconcentration—Spectrographic Method for the Determination of Trace Elements in Plant Materials and the application of the Biogeochemical method at the Silver Mine Lead Deposit, Cape Breton, Nova Scotia

Lovell, Howard Lawrence, B.Sc., Carleton—Petrology, Mineralogy, and Trace Element geochemistry of the Orvan Brook sulphide deposit, New Brunswick

Weston, Ayla Argun, B.Sc., Istanbul—Statistical Examination of Gravity Anomalies over pre-glaciated terrains

MATHEMATICS

Scott, Kenneth Francis Neil, B.Sc., Carleton— Σ —Divisible and Σ —torsion Free Modules over Arbitrary Rings

PHYSICS

Chu, Lily, B.Sc., Taiwan—Charge Distribution in Pb^{208} and Pb^{206} and Isotope Shift

Clement, Stephen William James, B.Sc., Sir George Williams—Physics and Chemistry of the Earth

Sarma, Vishnubhatla Sree Krishna, M.Sc., Andhra—Optical Properties of $Au Al^{12}$, $Au Ga^2$ and $Au In^2$

Master of Engineering

AERONAUTICAL

Wardlaw, Robert L., B.A.Sc., Toronto—On coupling Two-Dimensional Bluff Body Potential Flow to the Periodic Vortex Weight

Wong, John Kuo Sun, B.Eng., Nova Scotia Tech.—Second Approximation for Inviscid Hypersonic Flow over Slender Axisymmetric Bodies with Power Law Shock Waves

CIVIL

Habib, Alamgir, B.Sc., East Pakistan—Recovery Criteria in Load Tests for Reinforced Concrete Structures

Smith, Charles William, B.Eng., Carleton—Strength Characteristics of Asbestos Modified Asphalt Concrete Using Unconfined Tension and Compression Tests

ELECTRICAL

Baker, David Maxwell, B.A.Sc., Toronto—Pulse Shaping and Intersymbol Interference

Chudobiak, Walter James, B.Sc., Alberta—A Study of the Limitations on the Collector Efficiency of Class-D Voltage Switching Amplifiers

- Dawson, Allan Charles, B.ENG., Carleton—An Investigation of Methods to Realize Helicopter Hauldown and Landing
- Hill, Walter Alexander, B.ENG.SC., Western Ontario—A Study of a Controlled Tension Helicopter Hauldown System
- Kaye, Alan Roger, B.SC., ENG., A.K.C. London—The Effect of Errors in an Optimum Receiver for Interfering Symbols
- Kumar, Ashok, B.SC., Birla Inst. of Technology—SCR Control of Separately Excited DC Shunt Motors
- MacDonald, John Duncan, B.SC., St. Francis Xavier, B.ENG., Nova Scotia Tech., B.ED., St. Francis Xavier—Network Design by Iterative Techniques
- Petersons, Oskars, B.A.SC., Toronto—Improvement of Instrument Transformer Accuracy Using Feedback Techniques
- Venier, Gerald Oswald, B.A.SC., Toronto—Pulse Compression Using Frequency-Coded Non-Uniform Pulse Trains (U)
- Yee, Henry, B.ENG., McGill—Computer Design of Double-Tuned, Parallel-Parallel, Butterworth and Tchebysheff Filter Amplifiers

MECHANICAL

- Marathe, Manohar Shridhar, B.ENG., Poona, India—Heat Transfer and Freezing in Flowing Liquid Metals
- McCredie, Donald Clifford, B.ENG., Carleton—A Study of Pressure Pulses in a Pipe with Reference to the Exhaust Scavenging of two-stroke Engines
- Uddin, Md. Wahhaj, B.SC., East Pakistan Univ. of Eng. and Technology—Finite-Difference Solution of Two Dimensional Elastic Problems with Mixed Boundary Conditions

Extension Program

The responsibilities of the Adult Education Committee lie in two main fields, those of non-credit extension courses, and public lectures; viewing them both, Janus-wise, the committee is happy to report a further year fruitfully spent.

In the extension field, a total of 48 courses was offered, attracting a total of 1,192 registrants. The spread of subjects was of the catholicity by now traditional in the Carleton Extension Program, with the extremes perhaps represented by the Department of Geology's course in "Prospecting" and the Fine Arts Committee's "Life Drawing and Painting". This course, now taught by Duncan deKergommeaux after the departure of its founder, Gerald Trottier, seems already to have carved for itself a respected niche in the Carleton offerings, and, for the first time, is also being conducted in the summer.

Of the departments contributing to the program—Accounting, English, French, German, Journalism, Mathematics, Political Science, Public Administration, Psychology, Fine Arts, Economics and Geology—by far the most active remains the Department of English, sponsoring no less than 25 courses: Mr. and Mrs. Herman S. Roodman continue their annual crusade for Effective English, while Dr. James Steele has added to the program a new course in the Art of the Film.

In the field of public lectures there were three main series. The Department of Economics in the autumn of 1965 celebrated the Twentieth Anniversary of the "White Paper" on Employment and Income of 1945 with a series of six lectures on appropriate topics. It was begun by Dr. W. A. Mackintosh, the chief architect of the White Paper in question, followed up by a team of distinguished authorities that included Professor H. Scott Gordon, of Carleton, and concluded by Dr. John Deutsch, the Chairman of the Economics Council of Canada. This lecture series has now been published, as one of the Canadian Trade Committee Publications.

The Department of English contributed a series on "American Authors"; while it included such speakers as Gay Wilson Allen of New York University, on "The Two Poets of *Leaves of Grass*" and Milton R. Stern of Yale on "Mark Twain and Victorian Nostalgia", one's attention was perhaps even more drawn by the Carleton contribution—Dr. Marston LaFrance on "Stephen Crane", and Professor Munro Beattie, who let out the truth about "The Many Marriages of Henry James".

The Soviet Studies Committee followed up its successes of previous years with a series of eight lectures on "The Communist States and the West". The break-up of the monolithic Soviet bloc under the stress of internal dissension, and Canada's best course of action in the circumstances, were studied by a number of lecturers. Carleton contributed to the series lectures by Dr. Adam Bromke, "The Two Alliances: Conflict and Interdependence", and Professor Peyton Lyon, "The German Problem". The series was closed, appropriately, by the Hon. Paul Martin, on "Canada's Role in East-West Relations". This series is currently being published in book form, by Praeger.

Apart from these three series, there were also a number of single lectures, to the total of 13. The chief contributor was the Department of French, which not only put on a total of six, but included among them Prof. J. C. Chevalier's discussion (sponsored jointly with the Alliance Française) of the thorny problem "Y-a-t-il un Bon Usage?", a strong contender for any prize for the Best Delivered Lecture of the Year. Among other "one-night stands", honours for the Most Topical Lecture must be divided between the Department of Religion and the Department of Classics; the former for the lecture on the Dead Sea Scrolls, arranged and delivered at a week's notice by Mr. George Ramsey to coincide with a travelling exhibition of the Scrolls at the National Museum; the latter for the lecture "Scandal in the Roman Empire: the Enigma of Messalina", by Graham Sumner of the University of Toronto, a drama of sex and security that found itself scheduled for the same week as the Munsinger affair hit the headlines.

Finally, although not part of the formal program in Adult Education, nor directly a University responsibility, it would be difficult not to notice the extensive part played this year by Carleton staff in the new television program "University of the Air", broadcast every morning on the CTV network. It is particularly gratifying to note that while this is a nation-wide broadcast, coming from various institutions across the country, Carleton contributed more to it than

any other university in Canada. The chief participants were Miss Naomi E. S. Griffiths and Dr. Peter King of the Department of History, speaking on "Background to a Nation", an account of Canadian history in an international setting; Dr. A. Trevor Hodge of the Department of Classics, on "Ancient Society"; M. Jean Miquet of the Department of French on "Le Français par l'Image", in a total of no less than 40 programs; and Soviet Studies, which mustered an impressive *zemstvo* of sovietologists to do justice to "An Introduction to Soviet Russia".

A. TREVOR HODGE,
Chairman, Adult Education Committee

The Library

There were several innovations during the year. The most generally interesting was the initiative taken by the Students' Council to reduce losses of books and periodicals from the Library. By mid-October the Council had set up a system whereby a student prefect was on duty at the exit during Library hours to inspect brief cases and large bags for materials not signed out. There were numerous protests, especially about the inspection of women's handbags, and it became necessary for Senate to rule that use of the Library was conditional upon agreeing to the inspection at the exit. The prefects were selected and instructed by Students' Council, and their hours were scheduled by a student appointed to administer the project. The Library was responsible only for paying the prefects.

Comparative losses between July 1965 and July 1966, with the 1965 figures in brackets, are as follows: Books, 1,273 (2,080); single issues of periodicals and newspapers, 1,352 (1,424); bound volumes of periodicals, 37 (33). Many of the items missing at inventory are returned during the following year but others are stolen. It will not be possible accurately to assess the effect of the prefect system until we have had a full year with this operation. However, since losses of books were reduced after having mounted for years, there can be no doubt that the system serves a useful purpose.

The books placed on reserve for classes are those in greatest demand. Of about 6,000 on open-shelf reserve, 99 are currently missing. We do not yet have figures on the total number of books lost, for which payment has been made.

The prefect system also made possible the use of the Library as a study hall. Library hours were extended at night and on Saturday and Sunday with two stack supervisors on duty and a prefect at the exit. In summer, when there are comparatively few books to be shelved, the two stack supervisors were replaced by one commissionaire.

Some of the difficulties experienced by students in getting books appear to have been alleviated. It seems clear that the situation was improved by the heavy expenditures on duplicates, by more than doubling the number of books placed on reserve, and by the increase in the total collection. Few students who requested books reported that the books were not found on the shelves on the date due. Only 22 titles were requested four times or more during the year. It was our impression, after the prefect system went into effect, that the number of books found to be temporarily missing when requested had also been reduced.

In the past year the Cataloguing Department achieved an ambition of many years standing. They prepared for use more books and documents than the Acquisitions Department received, thus achieving currency in cataloguing. Titles acquired were 16,183 by purchase and 2,512 by gift. Titles catalogued were 19,854. The number of volumes made available for use was 30,133 books and documents—compared to last year's 17,355; and 2,000 periodicals. The collection now consists of 112,876 books and documents, 15,201 bound periodicals, an estimated 43,799 unbound volumes of periodicals, 618 reels of microfilm, 7,762 microcards, 2,110 microfiche, 207 theses and 331 discs. The total of items is now 204,207. These figures do not include a collection of University calendars and the Carleton Archives.

The Cataloguing Department achieved to some degree two other goals of many years standing: the cataloguing of periodical titles, and the reorganization of the Carleton Archives. The majority of the periodical titles was catalogued and it is expected that the cards will be typed and filed in one operation in the near future. The Acquisitions Department has been completing broken sets and a large number of Xerox copies of out-of-print issues has been on order for some time. When they come, the cataloguing should be completed. Regarding the Carleton Archives, a classification system was selected and much material catalogued. Additional material was gathered from various sections of the University and although the files for committees of Faculty Board and of Senate, and the files of faculty publications are far from complete, we do have a better record of the history of the University than ever before. In preparing old files of my own for the Archives, I was reminded of many things I had almost forgotten—for instance the grim retrenching year of 1951-52 when only 720 books were ordered for the Library.

The greatly increased flow of work in the Cataloguing and Acquisitions departments required much reorganization, created a

number of additional supervisory and administrative positions, and meant extensive training and retraining. A great deal of time was spent on preparing flow charts, revising work manuals and gathering statistics. We wanted to gain more detailed information about our operations in order to plan more intelligently. In addition, applications to the Canada Council for grants required much detailed information about our collection. The Bonn Survey of scientific collections, and the coming Downs Survey of academic libraries emphasized the necessity for having statistics readily available. One may wonder at times about their validity and usefulness but they seem to be part of the mystique of the scientific approach to modern problems.

The most outstanding gifts of the year were the Canada Council grants amounting to \$15,500. Some 300 volumes of Canadiana were received from the library of J. Lorne MacDougall. Holt, Rinehart and Winston gave a selected group of their own publications. A number of embassies, in particular that of the Federal Republic of Germany, gave books during the year. Various students' clubs such as the Ciné Club, Le Cercle Français and the Arts Undergraduate Society, also gave books. In the last days of the financial year the Library was able to purchase from Dr. Conrad Wright an excellent collection of some 2,400 volumes on economic history and world politics. An unusual gift was an oil painting by Goodridge Roberts given by a graduate, Mr. Alan Wilkinson, in memory of his mother.

Substantial gains were made during the year, and they promise to provide a firm foundation for work in the coming year.

HILDA G. GIFFORD,
Librarian

Report of the Registrar

The tables which follow illustrate the continuing rise in student enrolment at Carleton. The number of full-time day students totalled 3,024, an increase of nearly 12.4 per cent over the preceding year. Registration in the evening division reached 2,506, an increase of almost 19.3 per cent. Summer School increased by 22.8 per cent, to a total of 1,860 students.

Sixty-three per cent of the student body came from the Ottawa area (including Hull and district): the remainder were mainly from other districts in Ontario and Quebec, but included representatives of every province and of 51 (West Indies counted as 1) countries overseas.

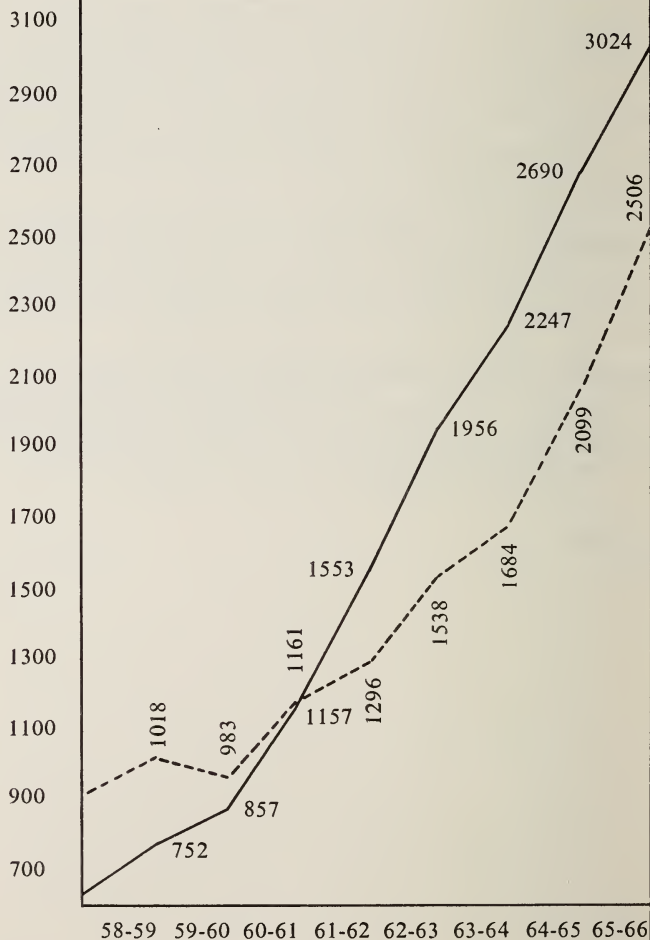
There were 2,467 applications for admission to the first university year. Of these 1,373 met our requirements and 847 registered in September. No student who met the minimum published requirements was refused admission.

JOHN NICOL,
Registrar

CARLETON UNIVERSITY ENROLMENT 1958-59 TO 1965-66

FULL-TIME ———

PART-TIME - - - - -



ENROLMENT, FULL-TIME DAY DIVISION 1965-66*

	Qual.	I	II	III	IV	Grad.	Cert.	Spec.	Total 1965-66	Total 1964-65
Arts	110	588	418	365	40	93	—	—	1,614	1,437
Science	101	202	143	108	19	84	—	—	657	606
Commerce	18	90	51	39	—	—	—	—	198	176
Engineering	—	125	77	44	55	20	—	—	321	280
Journalism	15	49	35	25	18	—	—	—	142	111
Pub. Admin.	—	—	—	—	—	67	2	—	69	67
Special	—	—	—	—	—	—	—	23	23	13
Totals	244	1,054	724	581	132	264	2	23	3,024	2,690

*Figures compiled 1 December 1965

GEOGRAPHICAL ORIGINS, FULL-TIME DAY STUDENTS 1965-66:

CANADA: (2,777)

Ottawa and district (1,840); Other Ontario centres (525); Hull and district (66); Other Quebec centres (245); Newfoundland (4); Prince Edward Island (1); Nova Scotia (12); New Brunswick (8); Manitoba (19); Saskatchewan (12); Alberta (23); British Columbia (21); Northwest Territories (1);

EUROPE: (23)

Britain (14); Denmark (1); France (2); Germany (2); Greece (2); Norway (1); Spain (1);

AFRICA: (39)

Basutoland (1); Bechuanaland (1); Brunei (1); Gambia (1); Ghana (1); Kenya (2); Malawi (5); Nigeria (7); Southern Rhodesia (3); Tanzania (1); Uganda (5); Zambia (2); Cameroon Republic (4); Ethiopia (1); Sierra Leone (4);

MIDDLE EAST: (5)

Aden (1); Egypt (3); Syria (1);

ASIA: (92)

Ceylon (1); Hong Kong (27); India (13); Malaysia (19); Pakistan (13); Singapore (2); China (8); Indonesia (2); Japan (1); Korea (1); Philippines (1); Vietnam (1); Macao (1); Thailand (2);

WEST INDIES: (49)

Antigua (4); Bahamas (1); Barbados (4); Bermuda (2); British Guiana (7); Dominica (1); Grenada (2); Jamaica (11); Montserrat (1); St. Vincent (1); Trinidad and Tobago (15);

SOUTH AMERICA AND LATIN AMERICA: (10)

British Honduras (5); Brazil (2); Colombia (1); Venezuela (2);

UNITED STATES: (27)

AUSTRALIA: (2).

DEGREES, DIPLOMAS, AND CERTIFICATES AWARDED
NOVEMBER, 1965, AND MAY, 1966

First Degrees

Bachelor of Arts (B.A.)	275	
Bachelor of Arts (with honours)	39	
Bachelor of Commerce (B.COM.)	32	
Bachelor of Engineering (B.ENG.)	46	
Bachelor of Journalism (B.J.)	38	
Bachelor of Science (B.SC.)	81	
Bachelor of Science (with honours)	22	(533)

Post-Graduate Degrees

Master of Arts (M.A.)	43	
Master of Engineering (M.ENG.)	17	
Master of Science (M.SC.)	9	
Doctor of Philosophy (PH.D.)	4	(73)

Diplomas

Public Administration (D.P.A.)	17	(17)
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Certificates

Public Service Studies (C.P.S.S.)	18	(18)
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Student Affairs

REPORT OF THE DEAN OF STUDENTS

The Dean of Students has administrative responsibility for residences, student aid, placement, athletics, off-campus housing, medical services, counselling and psychological services, and very importantly, for liaison with the student government. Separate reports are attached for athletics, student aid and placement, and for the Students' Association.

RESIDENCES

The changes predicted in last year's report on residences were rather more optimistic than what was actually realized. Grenville and Russell Houses for men could not in fact be occupied until January 1966 and it was necessary to adopt a variety of expedients to provide for all those who wished to be accommodated. Plans have been completed for a new residence for women as well as a centralized food services and instructional building for the residential area. Unfortunately it is not possible to build these required facilities because of a lack of money. Carleton has now achieved the state of being middle-aged among Ontario universities. We have not really begun to retire our capital indebtedness on any of our residence facilities and hence, unlike the older universities, we are not able to have our original residences pay for the new. On the other hand we built before the Province of Ontario instituted more liberal financial policies which benefited the younger universities.

The Provost of Residences, Dr. A. Munro Beattie will continue to act as senior resident for Lanark House. The other senior residents are: Mrs. W. H. Cox for Renfrew House, Dr. C. A. Marsden for Grenville House and Dr. T. W. Betz for Russell House. Mr. J. Irvine continues as residence administrative officer.

It is expected, with construction on new buildings complete and no new construction anticipated for this year, residents will be more

comfortable and continue to be academically productive.

One of the brighter aspects of residence life this year was the imaginative and colourful decoration of a section of the pedestrian tunnel leading from the residences to the academic buildings. It is expected that this venture will be continued as an annual competition.

OFF-CAMPUS HOUSING

The number of landlords offering accommodation in private homes doubled in the 1965-66 term. Presumably this was due in part, at least, to news media announcements in connection with the strike of employees of the firms constructing the new residences. Thus, the number of facilities offered was more than adequate for our needs.

As a result of the growing demands on the Off-Campus Housing Service a more efficient method of dividing the city into block areas utilizing the zoning boundaries of the Postal Department has been adopted. This system has proved most satisfactory.

The volunteers of Carleton's Alumnae Association made a valuable contribution to the newly instituted Housing Liaison Service. The experience gained from the first year of operation has resulted in the employment of more efficient methods of administering the service and has, consequently, set the pace for the coming year. It is expected that it will take a minimum of three years to inspect the 700 homes listed with the Student Personnel Office.

The Overseas Student Reception Committee has again proved a real asset to the University generally, and in particular, to the Off-Campus Housing Service in assisting students from overseas in locating suitable accommodation and getting settled.

HEALTH SERVICES

This year saw a critical examination of our requirements in the realm of health services on the part of all segments of the University. The Senate Committee on Student Affairs, student committees, the Senate and the Administrative Officers responsible all gave thoughtful consideration to the problem of the extent to which the University should assume responsibility for the health of students. In the end there was no fundamental change in the position stated in the report of last year. That is, we will continue to attempt to provide a service to students such that those who have health problems which are not academically disabling will be maintained as students. Those whose health is so impaired that they are not able to continue studies effectively will be referred to off-campus facilities, whether private or public.

As a consequence of our growth and consonant with our policy, it has been decided to extend the facilities available on the campus. Mr. Norman D. Fenn has been appointed Director of Counselling and Health Services. Dr. Jean M. Davey has been appointed Medical Adviser. Dr. Davey replaces her husband Dr. Eric Davey who has given many years of devoted service to Carleton but whose other commitments would not allow him to work the longer hours required. In addition Dr. Brian O'Brien will make weekly visits to the campus in his capacity as consultant psychiatrist. Professor D. K. Bernhardt will continue in his role as student counsellor, sharing the duties of Mr. Fenn in his primary function. Dr. Harold Breen who has been, for a number of years, associated with Carleton as a consultant psychologist will no longer be a member of staff. Miss K. Bayley who was appointed this year will continue as University Nurse.

It is expected that with the additional specialists available, and a more closely knit administration of health services in effect, students' needs will be adequately satisfied.

COUNSELLING SERVICE

During the academic year 1965-66 about 120 students were seen by the Student Counsellor Professor D. K. Bernhardt and about 25 by Dr. Breen. Many students were privately interviewed by psychiatrists. The number of students seen this year was about the same as in 1964-65. Four of the students were seen by Dr. Breen for more than 10 visits.

The sources of referral for these students were as follows: academic staff, 20 per cent; Dean of Students and his staff, (Nurse, placement, residences), 18 per cent; self or friends, 56 per cent; other or not noted, six per cent.

In addition to the students who were seen for formal office appointments an increasing number of students sought out the student counsellor at other places on and off the University campus to discuss problems.

The chief reasons for visits to the Student Counsellor again tended to fall into three major categories, with a great deal of overlap among the three: Problems of motivation, study habits, etc.; personal problems; academic placement and future goals.

The University of course provides many other sources of advice to students other than through the particular formal arrangements referred to above. All newly admitted students are assigned to a faculty adviser for the purposes of academic counsel. Students from

abroad may refer their particular problems to Professor M. A. Elbaz, the Overseas Student Adviser. The Awards Officer, Mrs. A. T. Loates is available for financial advice. Students in residence may refer problems of all kinds to the Residence Fellows and Senior Residents.

R. A. WENDT,
Dean of Students

MEDICAL SERVICES

Throughout the academic year the Medical Adviser was in attendance for consultation Monday, Wednesday and Friday, for at least an hour beginning at 12.30 p.m. During brief periods of absence from Ottawa on business, the duties of the Medical Adviser were carried out by Dr. Jean M. Davey. The downtown office facilities of the Medical Adviser have been utilized for certain specialized services including vaccinations and immunizations required by students and faculty in connection with overseas travel, health requirements for post-graduate work, etc. It is gratifying to report that with the extended health clinic accommodation, weight scales, storage cabinets and Autoclave sterilizer many additional services can now be performed at the University.

It was with sincere regret that owing to failing health, Mrs. Jean Gamble, Medical Health Nurse for several years, was forced to retire at the end of December 1965. Her contribution to student, faculty and university life as a whole was much appreciated. We were indeed fortunate to acquire the services of Miss K. Bayley who for many years was associated with the Medical Adviser, in the Department of National Health and Welfare.

During the year the University Health Nurse was in attendance from 10:00 a.m. to 4:00 p.m. Monday through Friday. She was also on call by telephone after hours for advice re emergencies and illness in residences. Since January with the opening of Grenville and Russell Residences, Miss F. A. Toporowski, Reg. N. an Arts student living in residence was on call for advice and treatment of minor illnesses occurring in residence after five o'clock.

I would once again reiterate that on balance the needs of the University students in residence are being met adequately, if not better than, the community citizens at large. I am making this statement being well aware of the difficulties experienced in dealing with and making arrangements for the emotionally disturbed patient; in this

connection, the services of Professor D. K. Bernhardt and Dr. H. J. Breen have been exceedingly helpful.

Some 848 pre-enrolment personal health record forms have been received, reviewed, and categorized as follows: 759, physically fit, no defects and capable of joining in all university activities; 75, some minor disability, but fit for all university activities unless restriction stated; 3, temporarily unfit—where indicated will be reconsidered at end of expected length of disability; 8, major disability preventing student from participating in sports or routine physical activities; 0, physically unfit and exempt from all physical activities; 3, conscientious objectors.

A substantial number of personal health record forms have been received on behalf of students applying for registration in the fall of 1966. Additional efforts to ensure that all new students comply with the University health requirements prior to registration will be made in the fall.

The mobile chest x-ray unit visited the University campus on September 14 and 15, 1965. In spite of all effort only 390 students took advantage of this facility. The Provincial Health Department, Tuberculosis Prevention Division through the May Court Clinic, is being requested to make this mobile chest x-ray unit available on campus again in the fall.

The facilities of the May Court Clinic, Besserer Street, have been most satisfactory in the investigation and follow-up of students with suspected T.B. The co-operation of Dr. G. T. L. Davies and latterly that of Dr. A. Jessamine and his staff at the Clinic is much appreciated.

The Medical Adviser and University Health Nurse made periodic visits to the University Commons for the purpose of inspecting the cafeteria and canteen. The hygienic and sanitary arrangements in these eating establishments were satisfactory. The cafeteria and canteen staff had chest x-rays at the May Court Clinic in accordance with City Health regulations for food handlers. Some minor complaints—and these are to be anticipated—have been registered by students re menu; these cannot be considered serious.

Arrangements were made for the St. John Ambulance Association to give a standard course of First Aid lectures to a group of 15 individuals from the University students, staff and faculty, during January to March 1966. Following the completion of the course 11 certificates were awarded to: four members of faculty; four graduate students; two undergraduate students; one member of staff.

The health of the student group throughout this year appears satis-

factory. I would like to point out the need for the expansion of the University Health Service program. Consideration to such expansion has been discussed with both Dean R. A. Wendt and the University President.

In conclusion I would be remiss if I did not take this opportunity of thanking both Mrs. Gamble and Miss Bayley, the University Nurses, for their services and invaluable contributions to university life. I am most happy to report that Miss Bayley will be returning after the summer vacation. May I also express my sincere thanks to Dean Wendt for his assistance and co-operation and in particular for the services of Mrs. J. S. Sandeman. Once again I have fully enjoyed my association with the University throughout the year.

E. L. DAVEY, M.D.,
Medical Adviser

FINANCIAL AID TO STUDENTS, 1965 - 1966

During the academic year, 2,324 students at Carleton were in receipt of some form of financial assistance. The University awarded Scholarships and Teaching Fellowships to 190 undergraduate and graduate students. From funds at its disposal Carleton granted bursaries and prizes to 480 deserving candidates.

The Province of Ontario provided assistance for 277 Ontario students; the Province of Quebec assisted 39 Quebec residents. One hundred and seventy-six students continued their education from grants provided by various agencies of the Federal Government. This latter group included 66 representatives of foreign countries who came to Canada under the aegis of the Department of External Aid: the Colombo Training Plan, United Nations Technical Assistance and the Commonwealth Scholarships. Thirty-five students were in receipt of aid from service benevolent funds, private donors and their respective governments. Another 20 students had all or part of their tuition fees paid by their employers.

A large number of students were forced to borrow money to see them through the year. The University issued 307 loans from its funds and 843 loans were provided under the Canada Student Loans Plan.

The recently announced Student Award Program of Ontario has resulted in sweeping changes in the student financial aid situation. Beginning in September 1966, awards under the Provincial Program

will be made available to all Ontario students in full-time attendance in university, who can demonstrate need of financial assistance and who are, or will be enrolled in post-secondary institutions. Non-repayable grants will be based on a maximum of 40 per cent of established need after the first \$150 which, in all cases, will be awarded in *loan form*. The Department of University Affairs will assess the amount of assistance required in each case, including the approval of loans from the Canada Student Loans Plan. No student will be able to obtain a grant from the Province who is not willing to accept part of it (approximately 60 per cent) as a loan.

In future the University will have no funds, other than such donated funds as we are free to employ for this purpose, to use for the financial assistance of students who are not Ontario residents. In fact, after 1966-1967 the University will have no funds to administer in the financial aid of students, other than donated funds.

The intent of the Province of Ontario Awards Program is good. It has made a substantial increase in the funds provided for Bursary assistance, and it has removed the requirements which previously limited eligibility for such assistance to those in the upper academic levels. The Government's evident intention of eliminating the financial barriers facing anyone qualified to admission to university is particularly welcomed.

However, the heavy dependence placed on loans is a serious drawback to the effectiveness of the Program in meeting its stated purpose. Loans are a deterrent rather than an incentive for students from the lower income groups. Secondly there is no provision in the Program for recognizing academic excellence. All Scholarships from public or donated funds will be deducted from the Bursary portion of the Ontario Program. Scholarships therefore will be more advantageous to the wealthier students.

Other apparent disadvantages of the Ontario Program are: parental contribution towards the student's educational costs is based on a scale which appears virtually impossible at many income levels; the application form itself is too detailed and too demanding; the assessment of need is too rigid. In attempting to provide sufficient funds for all the eligible students in Ontario, the Government Award Program seems to have sacrificed the individual in favour of the group. A student's whole future may rest on the decision of a departmental Assessor—therefore every individual applicant should be given the most careful and personal attention. This is not possible under the present system whereby the Student Aid Office of the Department of

University Affairs undertakes the assessment of thousands of applications in a relatively short period of time.

MRS. A. T. LOATES,
Awards Officer

SCHOLARSHIPS AWARDED SUMMER 1965

Entrance Scholarships

International Nickel Company of Canada Scholarship
David Hanes, *S-1, Ottawa

Henry Marshall Tory Scholarships

Timothy C. Craven, A-1, Ottawa; Danuta C. M. Kurowski, A-1, Ottawa;
Gilbert J. Painter, A-1, Peterborough

University Entrance Scholarships

Bethany Armstrong, A-1, Ottawa; Steven Dworkin, A-1, Ottawa; Sidney W. Goldstein, A-1, Ottawa; Robert W. Handforth, A-1, Ottawa; Marilyn J. Hayhoe, A-1, Ottawa; James E. Libbey, S-1, Ottawa; John G. Robbie, A-1, Ottawa; Helga J. Wintal, A-1, Arnprior; Anita M. Wooley, A-1, Ottawa

Mercy Neal Southam Entrance Scholarships

Terry J. Cheney, S-1, Ottawa; Ariana Sirko, A-1, Ottawa; Sandra R. Slack, A-1, Ottawa; Gregory Traversy, A-1, Ottawa

General Entrance Scholarships

Patricia J. H. Alexander, A-1, Ottawa; Sherrill R. Gluck, A-1, Ottawa; Michael Hidiroglou, S-1, Ottawa; Charlene E. Law, A-1, Ottawa; Randall P. Leavitt, S-1, Ottawa; Judith A. McCaffrey, A-Q, Ottawa; Ruth Paghis, S-Q, Ottawa; John D. Peart, S-1, Ottawa; Suzanne F. Pritchard, A-1, Ottawa; Susan Russell, A-Q, Ottawa; Susan Smith A-Q, Ottawa

Regional Entrance Scholarships

Neena Chappell, C-Q, Ottawa; Christine L. Hansen, A-1, Ottawa; Lianne T. Mitchell, A-Q, Montreal

Special Entrance Scholarships

John Derek Belyea, A-Q, Ottawa; Roma Kulynycz, A-1, Ottawa; Sheila A. O'Neill, S-Q, Ottawa; Catherine A. Rodgers, A-1, Ottawa; Lisa V. Shapiro, A-1, Ottawa; Gregory Traversy, A-1, Ottawa; Barbara J. Witt, A-1, Ottawa

*Denotes degree program and year

Dr. Frederick William Charles Mohr Scholarships

Sheryl Alenna Dool, A-1, Ottawa; Mary K. Fenyo, A-1, Ottawa; Helen Hodgins, S-Q, Ottawa; Barbara Howsam, S-1, Ottawa; Danuta C. M. Kurowski, A-1, Ottawa; Ann Mary Lyons, A-Q, Cornwall; Eric J. McKinney, E-1, Ottawa; Glen Munro, S-1, Ottawa; Catherine A. Rodgers, A-1, Ottawa; James H. Shore, S-1, Ottawa; Patricia L. Webb, J-1, Ottawa; Ian Wills, E-1, Ottawa; Susan J. Wood, A-1, Ottawa

Ottawa Citizen Scholarship

Edwin G. Thiessen, S-1, Ottawa

D. Roy Campbell Entrance Scholarship

Marie-Lynn Hammond, A-1, Ottawa

Association of Professional Engineers' Entrance Scholarship

David L. Ahrens, E-1, Ottawa

Union Carbide Canada Ltd. Scholarship

Scott A. Inrig, E-1, Ottawa

Duchess of Connaught Scholarship

Eric C. Hehner, S-1, Ottawa

Ottawa Business and Professional Women's Club Scholarship

Judy L. Fenwick, S-1, Ottawa

Scholarships In-Course

Carleton Alumni Association Scholarships

Ronald G. Blackwell, S-111, Renfrew; David A. Brown, E-11, Ottawa; Diana Fetterly, A-1, Montreal; Gilbert A. Hartley, E-1, Ottawa; Lawrence W. Hunter, S-111, Ottawa; Catherine R. Pickett, A-1, Ottawa; Sandra L. Skubiski, A-11, Ottawa; Donald L. P. Strange, S-111, Manotick; William C. Wyman, A-1, Ottawa; Ronald J. Yaworski, A-11, Ottawa; David King Shu Yue, S-Q, Ottawa

James A. Gibson Scholarships

David J. Gynane, A-111, Ottawa; Lachlan John MacRae, A-111, Ottawa; William J. Watts, A-111, Ottawa

Maxwell MacOdum Scholarships

Jean-Guy Boutin, S-1, Ottawa; Russell H. Davidson, A-11, Rivers, Man.; Richard O. Hansen, S-11, Ottawa; Christine Hart, S-111, St. Catharines; Pieter J. Helmke, A-11, Ottawa; Ellen D. Looker, A-1, Ottawa; John W. Mayne, S-111, Ottawa; Peter E. McRae, A-1, Flin Flon, Man.; Helen E. Parson, A-11, Ottawa; John L. Pearce, E-11, Ottawa; William D. Ramsay, E-111, Ottawa; Dennis L. Taylor, A-11, Ottawa

Ottawa Women's Canadian Club War Memorial Scholarship

Earl J. Doherty, A-Q, Ottawa

Lord Dundonald Chapter (I.O.D.E.) Scholarship

John G. Storr, E-111, Ottawa

Gavin Scott Macfarlane Memorial Scholarship

Kenneth W. K. Lane, A-111, Ottawa

University Women's Club of Ottawa Scholarship

Judith A. Hudson, A-11, Eastview

C. V. Hotson Memorial Scholarship

Laurence Kardish, A-111, Ottawa

Clendinnen Scholarship in Biology

Margaret R. Hetherington, S-111, Ottawa

J. P. Bickell Foundation Scholarships

Anthony N. Lecheminant, S-1V, Ottawa; K. Wayne Livingstone, E-1, Ottawa; Barry D. Simmons, S-1V, Ottawa

Dr. Frederick William Charles Mohr Scholarships

Judith M. Barker, A-111, Ottawa; Kenneth A. Huband, A-1, Ottawa; Ann Louise Lamb, A-Q, Ottawa; Paul T. F. Larocque, A-1, Ottawa; Karl-Heinz Laubstein, A-1, Ottawa; Wayne G. McIntyre, A-111, Pembroke; Gillian Mary Norris, A-1V, Ottawa; Keith R. J. Sandbrook, A-111, Ottawa; Inna Tolstoy, A-11, Hull, Que.; Toomas R. Vilmanen, E-11, Ottawa; Dorothy J. Whyte, A-11, Ottawa; Janice M. Young, S-1, Pte. au Chene, Que.; Inara Zivtina, A-111, Ottawa

Hume Wrong Scholarship

Peter E. Rider, A-111, Ottawa

Touche, Ross, Bailey and Smart Scholarship

John M. A. McKay, C-11, Ottawa

Alcan Scholarship

Martin A. Walker, S-111, Ottawa

Association of Professional Engineers' Scholarship

Andre C. Perras, E-1, Ottawa

Regent Vending Machines Ltd. Scholarships

John Pauksens, E-11, Ottawa; Toomas Vilmanen, E-11, Ottawa

Riddell, Stead, Graham and Hutchison Award

Gordon J. Mair, C-11, Ottawa

Charles Anthony Blundell Betts Memorial Scholarship in Physics
Nancy I. Covington, S-11, Ottawa

Arthur A. Crawley and Company Scholarship
J. Bruce Davis, C-11, Ottawa

International Nickel Company Scholarship
Johannes deBruijn, S-11, Ottawa

Ottawa Woman's Club Scholarship
Phyllida A. Kent, A-11, Ottawa

SUMMER EMPLOYMENT

To date, there is no marked increase over last year in the number of positions available to students. However, if the increased enrolment were considered, then there are relatively fewer jobs available this year.

There have been fewer construction jobs available. Perhaps this is due to construction cut-back initiated by government authorities. We have noted too, a decline in the number of clerical positions open to both male and female students. Of course, students who are able to type and/or take shorthand with some degree of proficiency encounter little difficulty in obtaining good paying summer jobs. Domestic and baby-sitting duties account for 85 per cent of the positions available to female students. The remainder represent an assortment of camp work, sales and clerical positions. Positions available to male students include sales, truck drivers, labour and camp work.

Representatives of the Canadian Government Pavilion and the Canadian Pacific Pavilion held interviews on campus this spring for summer positions in 1967. Consequently, a number of our students have already secured employment at Expo during Canada's Centennial Year. Summer employment opportunities for 1967 look much more encouraging than for this year.

PART-TIME EMPLOYMENT

Students generally consider part-time employment as "undesirable", primarily because of the demands of heavy course loads and/or participation in extra-curricular activities. Thus, the availability of financial assistance in the form of scholarships, bursaries and loans has proved an attractive alternative. In any case few students requested

the assistance of the Student Personnel Office in securing part-time employment during the Winter Session.

Students who require part-time employment usually find tutorial positions the most profitable because they can usually be arranged at a time convenient to the student's time schedule.

STUDENT PLACEMENT

Report on the 1966 Carleton University Graduates Spring and Fall Convocations

A. *Employment after Graduation* Positions accepted: (239)

Business and Industry (Including C.A. firms, publishing companies, etc.)

Arts	21	Commerce	24	
Science	18	Journalism	15	
Engineering	23			Total: 101

Government Agencies (Federal, including C.U.S.O.; provincial, civic and foreign)

Arts	39	Commerce	6	
Science	12	Journalism	9	
Engineering	15			Total: 81

Teaching (University, secondary, public and foreign)

Arts	50	Commerce	1	
Science	6	Journalism	0	
Engineering	0			Total: 57

B. *Further Studies*: (241)

To continue studies in their respective disciplines:

Arts	92	Commerce	3	
Science	67	Journalism	3	
Engineering	14			Total: 179

Professional Areas: Education (O.C.E.; teachers' colleges; faculties of education): (23)

Law	15	Library Science	2	
Theology	4	Occupational		
Physical		Therapy	2	
Education	3	Business		
Medicine	1	Administration	5	
Social Work	4	Journalism	3	Total: 62

C. *Scholarships, Assistantships, etc. awarded to 1966 Graduates:* (113)

Arts:

Ontario Fellowships	35	
Commonwealth	1	
Woodrow Wilson	1	
University Awards (other)	9	
Foreign Governments	2	
		Total: 48

Some Universities: Yale, Harvard, Illinois, Carnegie, Johns Hopkins, Texas, Syracuse, Oregon, Duke, Osaka, Munich, Edinburgh, Trinity College (Dublin), University College (Kenya), Auckland.

Science:

Ontario Fellowships	25	
National Research Council	13	
Commonwealth	1	
Woodrow Wilson	2	
Research Grants from Industry	2	
University Awards (other)	13	
		Total: 56

Engineering:

National Research Council Awards	5	
University Awards	3	
		Total: 8

Commerce:

Case School of Technology Scholarship	1	
		Total: 1

D. Number of employing agencies which recruited on campus:	135
Number of agencies which contacted the office for employment of students:	100
Number of student interviews held on campus 1965-66:	1,900

An excellent report on the 1965-66 student recruitment program has been compiled by Mrs. D. M. Wright. She is to be commended for her detailed and comprehensive submission.

MRS. A. T. LOATES,
Student Personnel Officer

ATHLETICS

This was a year in which the team sports enjoyed better than average success in both intercollegiate and intramural athletics.

The latter experienced increased participation among the male students in flag football, basketball, volleyball, broomball and hockey while a new and gradual awakening of interest appeared on the part of the women students in volleyball, flag football, broomball and basketball. The individual sports of the intramural program such as table tennis, harrier, track and badminton failed to gain the measure of success that was anticipated. This fact can be partly accounted for by the many demands made by other activities on the Department's limited staff. A greatly improved intramural program is expected to be provided next year with the addition of two full-time members of staff.

In the men's intercollegiate program the individual sports of tennis, golf, skiing and fencing slipped slightly from their loftier positions of the previous years but the newest entry, the men's badminton team, won an unofficial championship by taking first place in a five-team Ottawa St. Lawrence Athletic Association trial tournament.

In the intercollegiate team sports the soccer team set the trend for the year by winning Carleton's first soccer championship with an excellent 6 and 1 record.

The football team, although not expected to do anything outstanding due to heavy graduation losses, won five straight before losing the Panda Game 27-19, with a record crowd of 6,500 spectators in attendance.

For the fourth consecutive year the basketball team finished first in regular season play before moving on to win its second consecutive OSLAA Championship. Basketball excitement in Ottawa reached a new high as the team, compelled by CIAU regulations to meet Waterloo Lutheran, champions of the OIAA in the first round of the Nationals, had to come from behind on seven occasions in order to win. Since the game was a sell-out, it was indeed fortunate, and a consolation to the great number of people who were unable to purchase tickets, that the game was broadcast by radio station CFRA.

Still another championship was acquired as the curling team defeated nine conference opponents to win the OSLAA title. Only the hockey team of the major team sports was unable to maintain or improve upon last year's record. Many practice sessions were badly disrupted or cancelled due to inclement weather. Sudden thaws or unexpected snow storms were hard on team morale and conditioning.

Women's intercollegiate volleyball and basketball once again proved

to be very satisfying experiences for those students participating in them. A tennis team was organized for the first time and the volleyball team had its best season ever, winning 12 of 17 matches. Next year, with a full-time woman member of staff, and the first East-West Conference Championships to look forward to, varsity athletics for Carleton's women students hold much promise.

Similarly the men students can look forward to having a new, full-time male member of staff to direct the expansion of the intramural program, and to initiate the Department's first steps to establish a service program of physical education instruction.

KEITH N. HARRIS,
Director of Athletics

THE STUDENTS' ASSOCIATION

During the past year the Students' Association engaged in a large number of activities, both old and new.

It was a most successful year for social events. Frosh Week introduced our newcomers to the great Carleton Way of Life. Winter Weekend, featuring the Barbarians and the New Christy Minstrels, was the biggest, best (and most profitable) yet. The Christmas Dance and the formal Spring Ball were both very well received.

While the constitution of the Students' Association survived the year without drastic alteration, students became much more interested in university government. Increased representation was achieved on a number of university committees, and students are serving on a joint committee to consider the Duff-Berdahl Report on university government.

Club activity continued to expand at a rapid rate as more than 15 new club constitutions were approved by Students' Council. Several clubs distinguished themselves outside the campus, notably Sock and Buskin, which swept the top awards at the Canadian University Drama League festival.

The weekly newspaper of the Students' Association, *The Carleton*, provided a balance, usually judicious, between information and views whenever its release was not delayed by Students' Council. A colourful edition of our yearbook, *The Raven*, was published during final exams. *The Halcyon* enabled Carleton's writers to demonstrate their talents. An attractive *Students' Handbook* was distributed during registration; the *Students' Directory* came out somewhat later. Questionnaires were distributed by the editors of the *Counter-calendar* so

that a comprehensive course critique could be published before registration in the fall of 1966.

The Representative Assembly and the Students' Council were concerned, along with other student governments across Canada, with the lack of equality of educational opportunity. A successful symposium, which was held at Golden Lake, focussed on the problems of student financing. Participants listened to and held discussions with Professor John Porter of Carleton, and the President and Vice-President of the Canadian Union of Students, among others. A few weeks later, Carleton students engaged in an orderly demonstration on Parliament Hill along with students from other Ottawa post-secondary institutions to mark National Student Day.

Two other important areas of consideration were the problems facing the Canadian Indian and problems of mental health in the university environment. An Indian Week, sponsored by the C.U.S. Committee, was highlighted by addresses from several leading Indian spokesmen, as well as an entertainment night and a cultural display. A symposium on mental health preceded the detailed report submitted to Council by a committee struck to deal with this subject.

Considerable progress was achieved by the University Union Planning Committee with the hiring of a consultant and the appointment of an architect. The Committee also prepared, mailed and evaluated the results of a detailed Student Need Survey. It is to be hoped that planning can now be completed on this important project in the very near future.

While complete agreement was not always achieved with faculty and administration (and sad the day when it is), relations between student representatives and representatives of these groups developed in a spirit of mutual respect and co-operation.

HUGH ARMSTRONG,

President, Students' Association, 1965-66

Alumni Association

Fund raising and future plans were the chief concerns of the Alumni Association, with Mr. Frederick E. Gibson, B.A. '56, as National President. Dr. Grace E. Maynard, B.A. '51, was Chairman of the Alumni Division of the Carleton University Campaign, and the alumni have already contributed and pledged \$34,155 towards their four-year goal of \$45,000.

Plans for the future included discussions of a possible change in the existing financial arrangements between the National Executive and other Carleton alumni groups; combining with the students for the 1966 reunion-homecoming; and formation of a special committee to review the present state of the Alumni Association and to suggest ideas for coming years.

The Toronto Branch held a wine and cheese party and a curling party, and the Ottawa Branch sponsored a football party and a Spanish wine and cheese party. The women graduates in Ottawa continued their survey of off-campus housing for students, and held a tea for women students from overseas, a bridge party with the proceeds going to the Campaign, and a sherry party at Christmas.

John C. Clarke, B.A. '54, Past President, became one of three alumni representatives on the Board of Governors at the end of Dr. Grace Maynard's term. Dr. Maynard was re-appointed to the Board.

Mrs. Elizabeth (Dorofi) Komarnisky, B.J. '63, resigned from the position of Alumni Executive Secretary in March, and Miss Margaret MacDonald, B.A. '66, was appointed in May.

SHIRLEY GILLESPIE,
for the Alumni Association

Development Office

THE CARLETON UNIVERSITY CAMPAIGN

Carleton announced in the spring of 1965 the launching of the Carleton University Campaign for \$3,000,000. The reasons for the campaign are simple. If Carleton is to accommodate nearly 7,000 students by 1970, then new buildings and facilities must be provided on our campus. Not buildings for the sake of buildings, but buildings for a growing student population.

Total cost of these minimum facilities will be \$23,000,000. If Carleton can raise \$3,000,000, then the Province of Ontario and Central Mortgage and Housing Corporation mortgages will provide the balance of \$20,000,000.

The campaign was launched under the dedicated leadership of two members of our Board of Governors—Mr. Denis M. Coolican and Mr. F. K. Venables. They, in turn, recruited many hundreds of volunteers encompassing the canvass of companies and of individuals, committees for printing and advertising, and the hundred and one other special groups that are necessary for a well-planned campaign.

The results of the campaign, as they stand to-day, are most encouraging. We have received \$1,955,529.99 from 6,997 companies and individuals both in Ottawa and across the country, as of 30 September, 1966.

This was Phase I. Now we begin Phase II with the ultimate objective of attaining, and we hope passing, our goal. We may take pride at this point, for this is more money than Carleton has ever received from a campaign in the past, and each Division is well ahead of Division results from previous campaigns. There is a long way to go before we reach our goal, yet I am confident that it may be reached within the four-year period of the campaign.

In particular, we pay tribute to Mr. M. R. Jack and his committees who are responsible for the canvassing of national corporations across Canada. Of particular interest is the fact that more than 150 companies

have contributed to Carleton for the first time and that the majority of them have indicated that they propose to include us in their donations' budgets from now on.

Of great significance to the campaign was the Federal Government approval of an official canvass within the Public Service of Canada. We thank warmly Mr. J. H. Warren, the Deputy Minister of the Department of Trade and Commerce, who assumed Chairmanship of our Public Service Division, and his hard-working team who planned so well. The response from Public Servants in Ottawa has been magnificent and is one further example of the dedication of Civil Servants to their community.

We are proud too of the support given to the campaign by our own internal Carleton family. Faculty and staff and students, alumni and parents—all have shown their belief in the development of our University.

We are grateful to all volunteers in each Division. With such a powerful illustration of a community in action, I am sure that our goal will be attained.

BEQUEST PROGRAM

Under Mr. A. B. R. Lawrence's Chairmanship, our Bequest Committee has been most active throughout the year. Aided by the campaign, they have programs for a more concentrated approach towards obtaining bequests for Carleton University. A detailed bequest brochure is now available for those who are willing to consider investing in the future of Carleton.

Through the year, our Development Office has been preparing detailed records both on corporate giving and foundation aids available in Canada and we hope that this information will give strength to the University as a whole and for specific programs within our Faculties.

MICHAEL D. ROBERTS,
Development Officer

Information Office

This report must begin with words of thanks to the 18 volunteer members of the Information Division of the Carleton University Campaign, who, under the chairmanship of Mr. C. H. Everett, provided the Information Office with ideas and guidelines for its role in the Campaign; to the news media of Ottawa for their exceptional interest and co-operation throughout the year; to the Carleton faculty, staff and students who worked so wholeheartedly with the Information Division and with this office for the Open House in February; and to the staff of the Information Office, particularly Mrs. G. B. Patterson and Mr. D. M. Pattison, who joined the office in time for a very busy year.

New projects carried out by the Information Office were preparation of a display and co-ordination of live exhibits for the Collegiate Institute Board's Career Expo '66, and the planning and arranging of the 1966 Summer School extra-curricular program of concerts, drama, poetry readings and films.

In addition to the day-to-day coverage of University news, the office assisted in the planning of three Convocations, the formal opening of the E. W. R. Steacie Building for Chemistry, production of the President's Report, and in tours for visitors—including some 25 high school groups.

The year ended with a one-day meeting, at Carleton, of Information Officers from 30 universities across Canada for an exchange of useful ideas. Forerunner was a meeting of the Ontario group last year at McMaster, and it is planned that future meetings will include all Canadian universities.

SHIRLEY GILLESPIE,
Information Officer

Report of the Bursar

When we speak of the growth of Carleton we usually speak of the increase in the size of the student body, or of the faculty, or of the educational programs, or of graduate work or research. It may be interesting to take a look backward at the growth shown in the University's accounts.

Twenty years ago—the year 1945-46, the last year Carleton operated without a building of its own—its operating income was almost \$85,000. Ten years ago—the year in which the first sod was turned on our new site—income was \$550,000. In the year just ended it fell a little short of \$6,000,000. These three figures are approximately as 1 : 6.5 : 70.

Growth at this rate has resulted in a constant pressure on the business office to find more efficient ways of performing each of our tasks, to introduce these new ways as soon as it is economic to do so, and to recruit specialists made necessary by the new systems. There are two current examples of these processes.

The first of these is the preparation now being made to put our accounting work on the computer ordered for delivery in March 1967. This fifth change in accounting system in the last 20 years is the most exacting. Analysts and programmers are already at work preparing for the, hopefully, smooth transition to this new system.

The second example is the maintenance control panel which has been installed over the last year and taken over by the University a few months ago. This expensive and complicated piece of equipment will make it possible for one operator in the central heating plant to monitor conditions in several hundred locations in the University buildings and to stop and start certain of the important heating and cooling and air-circulation machines. This panel has been years in the planning and construction process. When it is “de-bugged” it should lead to a material improvement in our learning and living and working environment.

On the following pages are the balance sheet for the University as of June 30, 1966, the summary statement of income and expenditure for the year 1965-66, and a statement of benefactions received in this past year.

F. J. TURNER,
Bursar

CARLETON UNIVERSITY BALANCE SHEET, JUNE 30, 1966

ASSETS

CURRENT FUNDS:

Cash on hand		\$ 1,480.00
Accounts receivable:		
Fees	\$ 68,823.77	
Other	58,539.14	
	<hr/>	
	127,362.91	
Less: Allowance for doubtful accounts	17,000.00	
	<hr/>	110,362.91
Bookstore inventory—at cost	68,350.29	
Less: Allowance for obsolete and slow moving stock	2,000.00	
	<hr/>	\$ 66,350.29
Prepaid expenses and supplies		56,987.33
Deferred expenditure on parking facilities		40,494.64
Mortgages receivable		46,643.34
Due from other funds:		
Endowment	11,984.08	
Plant	1,683,503.41	
Loan	13,509.53	1,708,997.02
	<hr/>	
Deficit		451,508.43
		<hr/>
		\$ 2,482,823.96

ENDOWMENT FUNDS:

Investments—at cost (market value \$711,873)	621,274.68
Accrued interest on investments	11,984.08
	<hr/>
	\$ 633,258.76

PLANT FUNDS:

Investments—at cost (market value \$1,400)	1,100.00
Mortgages receivable	3,906.78
Due from trustee	5.00
Plant assets— at cost (note 3) *	
* See page 77.	32,648,767 57
	<hr/>
	\$32,653,779.35

LOAN FUNDS:

Loans receivable	172,585.39
Cash in hands of trustee	2,491.96
Investments—at cost (market value \$111,317)	99,921.82
	<hr/>
	\$ 274,999.17

LIABILITIES AND CAPITAL

CURRENT FUNDS:

Bank overdraft	\$ 453,715.13	
Bank loan	1,000,000.00	
Accounts payable and accrued liabilities	552,079.70	
Research grant funds held in trust	266,344.26	
Deferred tuition fees	143,116.05	
Deposits on residence accommodation	25,177.00	
Deferred income—other	409.75	
	-----	\$ 2,440,841.89
Unexpended restricted current funds		41,982.07

ENDOWMENT FUNDS:

Endowment principal	599,422.48		-----	\$ 2,482,823.96
Add: Net profit on sales of securities	20,800.91			
	-----	620,223.39		
Due to trustee		1,051.29		
Due to current funds		11,984.08		
		-----	\$	633,258.76

PLANT FUNDS:

Mortgages payable (note 1)	2,862,212.16	
Debentures payable (note 2)	10,574,760.63	
Due to current funds	1,683,503.41	
Funds held in trust re students union building	80,332.39	
Plant funds principal	17,452,970.76	
	-----	\$32,653,779.35

LOAN FUNDS:

Principal:				
John W. Parker Fund	251,412.69			
Sundry	10,076.95			
	-----	261,489.64		
Due to current funds		13,509.53		
		-----	\$	274,999.17

F. J. TURNER—*Bursar* A. B. LAROSE—*Controller*

SUMMARY STATEMENT OF CURRENT INCOME, EXPENDITURE AND DEFICIT

For the Year Ended June 30, 1966

(with comparative figures for the year ended June 30, 1965)

	1966	1965
CURRENT INCOME		
Ordinary Income:		
Student fees	\$ 1,975,078.31	\$ 1,722,678.58
Gifts and grants	48,918.67	50,602.26
Miscellaneous income	34,583.69	28,223.54
Investment income (net)	37,503.77	32,792.95
Current government grants—		
Provincial	2,775,000.00	1,802,000.00
Federal	676,598.25	681,286.65
	<u>5,547,682.69</u>	<u>4,317,583.98</u>
Sponsored or Assisted Research Funds—		
per contra	391,675.80	224,279.33
	<u>\$ 5,939,358.49</u>	<u>\$ 4,541,863.31</u>
CURRENT EXPENDITURE		
Ordinary Expenditure:		
Instruction	3,636,989.22	2,854,844.04
Library	535,974.40	378,974.05
Administration	509,952.72	353,394.44
Plant maintenance	673,302.40	509,416.01
Scholarships and bursaries	109,679.57	90,842.00
Miscellaneous	162,234.36	136,733.72
	<u>5,628,132.67</u>	<u>4,324,204.26</u>
Sponsored or Assisted Research Expenditure—per contra	391,675.80	224,279.33
Ancillary Enterprises—net deficit	54,620.45	40,332.65
Extraordinary Operating Expenditure	45,749.66	46,071.78
	<u>6,120,178.58</u>	<u>4,634,888.02</u>
DEFICIT FOR THE YEAR	180,820.09	93,024.71
Balance of deficit at commencement of year	270,688.34	177,663.63
DEFICIT AT CLOSE OF YEAR	<u>\$ 451,508.43</u>	<u>\$ 270,688.34</u>

EXPLANATORY NOTES TO BALANCE SHEET

Year Ended June 30, 1966

Note 1.

Details of mortgages outstanding are as follows:

(1) On Lanark and Renfrew Residences and University Commons— $5\frac{3}{8}\%$ due in 2014 payable in instalments of principal and interest of \$7,205.07 per month	\$1,489,212.16
(2) On Grenville and Russell Residences— $5\frac{3}{8}\%$ due in 2016 payable in semi-annual instalments of principal and interest of \$39,698.46 each.	1,373,000.00
	<u>\$2,862,212.16</u>

Note 2.

Debentures outstanding at June 30, 1966 bear interest at $5\frac{1}{2}\%$, mature at various dates between July 16, 1994 and June 15, 1996 and are payable in annual instalments of principal and interest amounting to \$732,777.39 from grants by the Provincial Government.

Note 3.

As of June 30, 1966 total capital expenditure to date amounted to \$32,648,767.57. These capital outlays include only billings to June 30, 1966. Commitments had been made to June 30, 1966 for a further amount of approximately \$7,236,000.00. Since that date additional commitments have been authorized in the amount of approximately \$156,700.00.

It is anticipated that the bulk of the funds to meet these commitments will be derived from the sale of debentures to the Ontario Universities Capital Aid Corporation.

BENEFACTIONS RECEIVED JULY 1, 1965—JUNE 30, 1966

Grants and Gifts for Current Operations

Province of Ontario.....	\$ 2,775,000.00
Government of Canada.....	676,598.25
Annual Giving Programs	
Friends of Carleton.....	1,583.00
Alumni Fund.....	10,068.75
Corporations.....	880.00

Capital Grants and Gifts

The Carleton University Campaign, cash received.....	610,663.31
Gift for Chapel Fund—Edna M. Hook.....	10.00
Canadian Public Relations Society.....	200.00

Endowment Gifts

Maurice Frederick Carty and Edward G. Carty...	1,300.00
Grace J. Dobbie.....	18,815.00
Estate of Edith Mary Stitt.....	32,500.00

Gifts Unrestricted

Aluminum Company of Canada Limited.....	300.00
Canadair Limited.....	500.00
International Business Machines.....	500.00
International Nickel Company of Canada Limited	1,155.00
Francis C. C. Lynch Estate.....	27,913.74
George D. Orr.....	25.00
Steel Company of Canada Limited.....	500.00

GIFTS FOR STUDENT AID

Scholarships

The Aluminum Company of Canada Limited.....	500.00
J. P. Bickell Foundation.....	3,000.00
Arthur A. Crawley and Company.....	500.00
Grace J. Dobbie.....	564.86
Lord Dundonald Chapter I.O.D.E.....	100.00
E. B. Eddy Company Limited.....	1,200.00
Jacob Freedman Charitable Foundation.....	2,292.81
International Nickel Company of Canada Limited ..	2,445.00
The Leonard Foundation.....	1,400.00

The Dr. Frederick William Charles Mohr Scholarships.....	10,286.14
National Press Club of Canada Scholarship in Journalism.....	515.00
Ontario Professional Engineers' Foundation For Education.....	1,000.00
Ottawa Business and Professional Women's Club ...	200.00
The Ottawa Citizen Scholarship.....	1,100.00
Reader's Digest Fellowships in Journalism.....	1,000.00
Regent Vending Machines Limited.....	200.00
Riddell, Stead, Graham and Hutchison.....	515.00
Touche, Ross, Bailey and Smart.....	500.00
Union Carbide Canada Limited.....	1,300.00
University Women's Club of Ottawa.....	100.00

Bursaries

A.N.A.F. Veterans, Capital Unit.....	350.00
A.T.A. Trucking Industry, Educational Foundation.....	1,100.00
Altrusa Club of Ottawa.....	100.00
Arnhem Chapter, I.O.D.E.....	100.00
Atkinson Charitable Foundation.....	7,400.00
Beta Sigma Phi Sorority.....	250.00
J. P. Bickell Foundation.....	2,700.00
Birks Family Foundation.....	1,515.00
Carleton University Faculty, for Student Bursaries..	787.00
The Corporation House Limited.....	500.00
Countess of Ashburnham Chapter, I.O.D.E.....	200.00
Engineers' Wives Association Bursaries.....	350.00
Falkland Chapter, I.O.D.E.....	100.00
C. A. Fitzsimmons and Company Limited Bursaries	150.00
The Mary C. Grant Bursary (Laurentian Chapter, I.O.D.E.).....	450.00
Gyro Club of Canada.....	500.00
Hydro Electric Power Commission of Ontario.....	500.00
International Business Machines.....	1,000.00
Kiwanis Club of South Ottawa.....	1,000.00
Kiwanis Club of South Ottawa, Ladies Auxiliary ...	100.00
Knights of Pythias—Aurora Lodge.....	100.00
Lions Club of Ottawa (South) Inc.....	400.00
The M. Loeb Ltd.—IGA Bursaries	4,500.00
Loyal Order of the Moose.....	400.00

National Printers Limited.....	250.00
Charles Ogilvy Limited.....	1,000.00
The Ottawa Citizenship Council.....	225.00
Protestant Girls' Club of Canada	100.00
James H. Rattray Memorial Bursaries.....	1,000.00
Steel Company of Canada Limited.....	500.00
Wild of Canada Limited.....	250.00
Harry Wood Company.....	150.00

Prizes

American Society for Metals Prize in Engineering. . .	25.00
Anonymous.....	25.00
Henry Birks and Sons, Ontario Limited.....	25.00
B'Nai B'Rith Awards.....	100.00
Canadian Institute of Mining and Metallurgy, Ottawa Branch.....	75.00
The Chartered Institute of Secretaries Prize.....	25.00
The Chemical Institute of Canada.....	25.00
Engineering Institute of Canada.....	300.00
V. A. Ewing Memorial.....	100.00
Lillian I. Found Prize for Poetry.....	25.00
H. Carl Goldenberg Book Prize.....	25.00
Roderick C. McDonald.....	500.00
Mr. and Mrs. H. S. Roodman.....	30.00
National Council of Jewish Women.....	300.00

STUDENT AID FROM ENDOWED FUNDS

Scholarships

C. A. B. Betts Memorial.....	450.00
Duchess of Connaught Scholarship.....	350.00
D. Roy Campbell Scholarship.....	500.00
C. V. Hotson Memorial.....	100.00
Ottawa Woman's Club Scholarship.....	225.00
Ottawa Women's Canadian Club War Memorial....	100.00
Gavin Scott MacFarlane Memorial.....	200.00
Mercy Neal Southam Entrance Scholarships.....	1,000.00
Edith M. Stitt Scholarship.....	400.00
L. N. Wadlin Scholarship in Mathematics.....	225.00
Hume Wrong Scholarship.....	225.00

Bursaries

R. A. Beamish.....	250.00
Nathan Braham.....	200.00
Maurice Frederick Carty and Edward G. Carty.....	600.00
Ottawa Citizen's War Services Committee.....	60.00
Ottawa Superfluity Shop.....	180.00
The Phillips Bursary.....	200.00
Ormond M. Stitt Bursary.....	400.00
Honourable Cairine Wilson Bursary.....	200.00
George M. Wolfe.....	15.00
Philemon Wright Chapter, I.O.D.E.....	75.00

Prizes

Dr. M. Ralph Berke Prize in Chemistry.....	25.00
D. F. McKechnie Prize in Accounting.....	Book Prize
Wilgar Memorial Prize in English.....	Book Prize
Kenneth R. Wilson Memorial Award for Journalism	200.00

F. J. TURNER,
Bursar

New Appointments

FACULTY OF ARTS

Academic Year 1965-66

Professors

- P. Lyon, B.A. Manitoba and Oxford, M.A., D.PHIL. Oxford—Political Science, and Chairman of the Department
- F. Ouellet, B.A., LIC. Laval—History
- M. Trudel, A.B. Trois-Rivieres, L. ES L., D. ES L. Laval—History, and Director of the Institute of Canadian Studies

Associate Professors

- R. Caterina, B.COM. Toronto, M.B.A. New York, C.A.—Accounting
- D. McDougall, B.A. Queen's PH.D. Johns Hopkins—Economics
- L. H. Strickland, A.B. Johns Hopkins, M.A., PH.D. North Carolina—Psychology
- P. E. Uren, M.A. McGill—Geography
- V. F. Valentine, B.A., M.A. Toronto—Sociology

Assistant Professors

- R. L. Carson, B.A. Indiana, M.A. Minnesota—Economics
- E. U. Choudhri, B.A. Government College, Lahore, Pakistan, M.A. Panjab—Economics
- J. N. Cooper, B.A. Harvard, M.A. Michigan—History
- M. G. Fry, B.SC. (Econ.), PH.D. London—History
- R. B. Goheen, B.A. Toronto, M.A. Yale—History
- S. S. Guterman, A.B. Chicago—Sociology

- C. Haines, B.A., M.A. Trinity College, Dublin—English
- K. A. J. Hay, B.SC. Southampton, M.SC. Toronto—Economics
- J. M. Hems, M.A. Glasgow, PH.D. Aberdeen—Philosophy
- T. M. Hunter, B.A. British Columbia, A.M. Clark—History
- R. J. Jackson, B.A., M.A. Western, D.PHIL. Oxford—Political Science
- P. Laurette, LIC. ES L. Lille, DIP. ET SUP., D. ES L. Sarrebrücke—French
- R. R. March, B.A. Manitoba, M.A. Carleton—Political Science
- G. Melnikov, LIC. ES L. Lyon, C.A.P.E.S., Nancy and Aix-Marseille—Russian
- T. J. Scanlon, B.J., D.P.A. Carleton, M.A. Queen's—Journalism
- M. Stein, B.A. McGill, M.A. Princeton—Political Science
- T. Tolley, B.A. Oxford—English
- H. von Riekhoff, B.A. Western, M.A., PH.D. Yale—Political Science

Lecturers

- A. A. Barrett, B.A. Durham, B.A. Newcastle, M.A. Toronto—Classics
- D. Bedingfield, B.A., M.A. Memorial—English
- W. T. Bedwell, B.A., M.A. Manitoba—English
- E. J. Burwell, B.A. Toronto, M.A. Carleton—Psychology

A. Elbaz, LIC. ES L. Bordeaux—French
 M. Gobeil, B.A. Ottawa, M.A. McGill—French
 D. Goldstick, B.A. Toronto, B.PHIL. Oxford—Philosophy
 T. J. Henighan, B.A. St. John's College, New York, M.LITT. Durham—English
 G. W. Ramsey, A.B. Davidson College, Davidson, N.C., B.D. Union Theological Seminary, Richmond, Va.—Religion
 R. Ravano, PROF. DE INGLES Catholic University of Chile—Spanish and Language Laboratory
 R. A. C. Stewart, B.A. Victoria, Wellington, N.Z., ED.M. Harvard—Psychology
 M. Tait, B.A., M.A. Toronto—English
 M. J. Taylor, B.A. St. Mary of the Springs, Columbus, O., M.A. Georgetown—History
 D. J. Wurtele, B.A. London, M.A. McGill—English

Visitor

T. H. Coulson, B.A., M.A. Oxford—Visiting Associate Professor of English

Academic Year 1966-67

Associate Professors

T. H. Coulson, B.A., M.A. Oxford—English
 J. B. Waugh, B.COMM. Toronto, C.A., M.B.A. California—Economics

Assistant Professors

B. C. Bickerton, B.A., M.A. Acadia—History
 G. P. Browne, B.A., M.A. British Columbia and Oxford, D.PHIL. Oxford—History
 M. S. Cross, B.A., M.A. Toronto—History
 J. Downey, B.A., B.ED., M.A. Memorial—English
 M.-L. Funke, B.A. Queen's—Art
 S. K. Ghosh, B.S., M.S. Calcutta—Economics
 J. Goheen, DR. PHIL. Potsdam, STAATSEX Bonn—German

T. R. Harmstone, B.A. McGill, M.A. Radcliffe, PH.D. Harvard—Political Science
 J. R. Hofley, B.A. Manitoba, M.A. North Carolina—Sociology
 C. L. Johnson, B.A. McGill, M.A. Columbia—Economics
 W. Krynski, MAGISTER Lodz, DOCTORAL Strasbourg—French
 W. A. Mullins, B.S. Portland State, M.A. Arizona—Political Science
 A. J. Ray, Jr., A.B., M.A. Temple, PH.D. Rochester—Psychology
 T. J. Ryan, B.A., B.S. McMaster, PH.D. Iowa—Psychology
 D. R. F. Taylor, M.A. Edinburgh, CERT. IN EDUCATION London, PH.D. Edinburgh—Geography
 N. M. Willis, B.A. Cambridge, M.A. Toronto—History
 P. Wilson, B.A. Queen's—Journalism

Lecturers

D. G. Beer, B.A. Bristol, M.A. McMaster—Classics
 R. C. Blockley, B.A. Leicester—Classics
 W. P. Dunn, B.A. Carleton, DIP. OF ENGLISH STUDIES, Edinburgh—English
 R. R. A. Marlin, A.B. Princeton, M.A. McGill—Philosophy
 B. Roy, L.TH. Ottawa, B.PH. Montreal—French
 H.-H. Schmidt—German
 T. P. Wilkinson, B.SC. University of Newcastle Upon Tyne—Geography

Special Lecturers

W. M. Fraser, B.A. Carleton—French
 A. M. Rosenberg, B.A. Memorial, M.A. Middlebury—German
 E. Stichling, DIP. PHIL. Voroshilovsk Pedagogical Institute, Stavropol, U.S.S.R.—Russian

Visitors

G. S. Bhalla, B.A. Panjab, M.A. Agra, PH.D. London School of Economics—Visiting Associate Professor of Economics
 V. K. Chari, B.A., M.A., PH.D. Banaras—Visiting Associate Professor of English

FACULTY OF SCIENCE

Academic Year 1965-66

Associate Professors

- C. A. Barlow, B.A., M.A. Toronto,
PH.D. Leiden—Biology
A. L. Carter, B.S.C., M.Sc. Dalhousie,
PH.D. McGill—Physics
J. A. Webb, B.S.C., PH.D. London—
Biology

Assistant Professors

- T. W. Betz, M.A. Missouri, PH.D.
Illinois—Biology
B. P. Dawkins, B.S.C., M.Sc. Victoria,
Wellington, N.Z., PH.D. Queen's—
Mathematics
J. E. Graham, B.S.C. Carleton, M.A.
Queen's, M.S., PH.D. Iowa State—
Mathematics
J. A. Koningsstein, PH.D. Amsterdam
—Chemistry
P. Kruus, B.S.C. Toronto, LIC. TECH.
Denmark—Chemistry
P. E. Lee, B.S.C. Manitoba, M.S.C.,
PH.D. Wisconsin—Biology
E. J. Norminton, B.A., M.A. Western
—Mathematics
M. Rahman, M.Sc. Dacca, M.A.
Cambridge—Mathematics
C. S. Tsai, B.S. Taiwan, M.S., PH.D.
Purdue—Chemistry
R. H. Wightman, B.S.C., PH.D. New
Brunswick—Chemistry

Lecturers

- J. P. Fletcher, M.A., PH.D. Toronto—
Biology
B. G. Nemes, B.S.C., M.Sc. Manitoba—
Mathematics

Visitor

- M. J. Watson, B.S.C., M.Sc. Queen's—
Special Lecturer in Mathematics

Academic Year 1966-67

Professors

- P. Mandl, B.A., M.A., PH.D. Toronto—
Mathematics
R. L. Rosenberg, B.A., M.A. Cape
Town, PH.D. Berlin, D.I.C. Imperial
College—Mathematics

Associate Professors

- A. F. Gregory, B.A. Toronto, PH.D.
Wisconsin—Geology

- H. Schirmir, M.A., PH.D. Frankfurt—
Mathematics

Assistant Professors

- D. J. Brown, B.S.C. Birmingham,
PH.D. Cornell—Physics
C. MacLachlan, B.S.C., DIP. ED. St.
Andrews—Mathematics
M. E. McCully, B.S.A., M.S.A.
Toronto, PH.D. Harvard—Biology
E. Saleh, B.S.C., M.Sc. Dacca, M.A.,
PH.D. Western—Mathematics
K. S. Williams, B.S.C. Birmingham,
M.A., PH.D. Toronto—
Mathematics

Lecturer

- M. J. Watson, B.S.C., M.Sc. Queen's
—Mathematics

FACULTY OF ENGINEERING

Academic Year 1965-66

Assistant Professors

- G. W. Bigg, B.S.C. Alberta, M.S.
Illinois
F. W. Black, B.S.C. (M.E.) Manitoba,
M.A.S.C. Toronto
M. A. Copeland, B.S.C. Manitoba,
M.A.S.C. Toronto
J. B. Forrest, B.S.C. New Brunswick,
M.A.S.C. British Columbia
J. A. Goldak, B.S.C., M.Sc., PH.D.
Alberta
J. P. Jolly, B.S.C. New Brunswick,
M.A.S.C. Toronto

Academic Year 1966-67

Assistant Professors

- E. B. Fletcher, B.A. Royal Military
College, B.A.S.C. Waterloo
C. D. Holmes, B.S.C., B.S.C. (C.E.)
Manitoba, M.S.E. Michigan
P. Janzen, B.S.C. Alberta, M.S. Illinois
B. Pagurek, B.A.S.C., M.A.S.C., PH.D.
Toronto
E. Plett, B.A.S.C. British Columbia,
M.S., SC.D. Massachusetts Institute
of Technology

Visitor

- P. J. Moogk, B.S.C., M.Sc. Western—
Visiting Assistant Professor of
Engineering

LIBRARY

Academic Year 1965-66

- S. L. Anderson, B.A., B.L.S. McGill—
Senior Reference Librarian
M. C. Cooper, B.A., Holyoke, M.S.
(Library Science) Simmons—
Junior Reference Librarian

Cataloguers

- S. L. Jackson, B.A. Carleton
I. Mawhinney, B.A. Alberta, B.L.S.
British Columbia
M. Sosnowsky, B.A., B.L.S. Toronto
R. Von Weiss, B.A. British Columbia

Academic Year 1966-67

- F. Damtoft, B.A. British Columbia—
Bibliographer
D. Garland, B.A., B.L.S. British
Columbia—Reference Librarian
A. de Lotbinière-Harwood, B.A.,
B.L.S. British Columbia—
Reference Librarian
V. Z. Wilmeth, B.A. San José State,
M.A.L.S. Michigan—Senior
Reference Librarian

Cataloguers

- M. Armour, B.Sc. Glasgow, B.L.S.
Ottawa
S. Harvey, B.A. British Columbia
M. Kvetan, B.A. Marianopolis,
B.L.S. McGill

ADMINISTRATIVE STAFF

Academic Year 1966-67

- S. Bowes, B.A. (PE) Saskatchewan—
Assistant Director of Athletics
(Women)
R. A. Brown—Administrative
Assistant to the Dean of Students
J. D. Buck, B.Sc., M.Sc. Queen's—
Director of Computing and Data
Processing Centre
J. M. Davey, M.D.—Physician
H. E. English, B.A. British Columbia,
Ph.D. California—Director of the
School of Commerce
N. D. Fenn, B.S., M.Ed. Springfield—
Director of Counselling and
Health Services

M. MacDonald, B.A. Carleton—
Alumni Secretary

- K. I. McCuaig, B.A. Carleton, B.P.E.
Waterloo—Assistant Director of
Athletics (Program)
R. E. Mousaw—Assistant Director
of Athletics (Administration)
J. Nicol, B.A., M.A. Toronto—
Registrar

Promotions

Academic Year 1965-66

- From Associate Professor to Professor*
D. G. Anglin—Political Science
P. R. Beesack—Mathematics
D. K. Dale—Mathematics
M. A. Gullen—Engineering
S. F. Kaliski—Economics
P. M. Laughton—Chemistry
D. Millar—Engineering
M. K. Sundaresan—Physics
F. Vallee—Sociology
R. A. Wendt—Psychology

From Assistant Professor to Associate Professor

- D. G. Bowen—History
J. P. Johnson, Jr.—Geography
B. W. Jones—English
E. F. Kaye—French
E. M. Kushner—French
M. LaFrance—English
K. Z. Paltiel—Political Science
P. C. Pineo—Sociology
R. S. Talmage—Philosophy
W. M. Tupper—Geology
A. M. Willms—Political Science

From Lecturer to Assistant Professor

- J.-P. Baril—French
M. A. Furstenwald—German
N. E. S. Griffiths—History
R. C. G. Haas—Engineering
M. M. Hanna—English
F. J. E. Jordan—Public Law
W. B. Kay—French
C. Marsden—Spanish
A. D. McLay—English
T. J. Middlebro'—English
G. Roseme—Political Science
P. L. Rosen—Political Science

Academic Year 1966-67

- From Associate Professor to Professor*
C. H. Amberg—Chemistry
H. E. English—Economics
A. T. Hodge—Classics
P. Jewett—Political Science

G. R. Love—Physics
 S. R. Mealing—History
 H. B. Neatby—History
 F. E. M. Swallow—Classics
 F. Wightman—Biology

From Assistant Professor to Associate Professor

J. W. ApSimon—Chemistry
 G. D. Cormack—Engineering
 M. G. Fry—History
 C. Haines—English
 J. E. Hardy—Physics
 J. Jurado—Spanish
 T. K. Rymes—Economics
 T. J. Scanlon—Journalism
 J. M. Thompson—Philosophy

From Lecturer to Assistant Professor

R. D. Gould—German
 T. J. Henighan—English
 J. W. Leyden—Philosophy
 J. Miquet—French
 G. W. Ramsey—Religion
 T. J. Robinson—Classics
 M. Tait—English
 A. Tilson—English
 P. Varnai—Russian
 D. J. Wurtele—English

Changes in Status

H. E. English—Professor of Economics to Director of the School of Commerce
 R. A. MacKay—Visiting Professor of Political Science to Associate Director of the School of International Affairs
 G. C. Merrill—Professor of Geography to Associate Dean, Division II, Faculty of Arts
 T. J. Scanlon—Associate Professor of Journalism to Director of the School of Journalism
 J. A. Loates—from Student Personnel Officer to Awards Officer

Leaves of Absence

Academic Year 1965-66

P. R. Beesack, Professor of Mathematics—to devote his time to completing a textbook on Mathematics and to act as a consultant to the Defence Research Board, Ottawa

D. G. Bowen, Associate Professor of History—to carry out research in church-state relations in Dublin and England

H. E. English, Associate Professor of Economics—to undertake research with the Private Planning Association of Canada

M. C. Frumhartz, Associate Professor of Sociology—to direct research on the Carleton University Student Study

P. Jewett, Associate Professor of Political Science—while serving as a Member of Parliament

K. Kitchen, Assistant Professor of Political Science—to complete doctoral studies in the United Kingdom

J. E. R. Lloyd, Assistant Professor of Russian—to pursue doctoral studies in Moscow and the University of Paris

R. L. McDougall, Professor of English—to study comparative Commonwealth literature in England and Australia

K. D. McRae, Professor of Political Science—to undertake research with the Royal Commission on Bilingualism and Biculturalism

V. Mudroch, Associate Professor of History—to teach at Tougaloo College, Mississippi, under Woodrow Wilson Foundation Internship program

J. M. Thompson, Assistant Professor of Philosophy—to undertake doctoral research in philosophy in the United Kingdom

K. Van Dalen, Assistant Professor of Engineering—to complete doctoral studies at Cambridge University

F. Wightman, Associate Professor of Biology—to further his studies in plant physiology at laboratories in Great Britain and France

G. J. Wood, Associate Professor of English—to study the cultural history of the Italian Renaissance in Florence and other centres

Academic Year 1966-67

D. Anglin, Professor of Political Science—to serve as Vice-Chancellor of the University of Zambia

- I. L. Bayly, Assistant Professor of Biology—to complete doctoral studies at the University of British Columbia
- R. W. Cockfield, Lecturer in Engineering—to pursue doctoral studies in civil engineering at the University of Waterloo
- R. C. G. Haas, Assistant Professor of Engineering—to pursue doctoral studies in civil engineering at the University of Waterloo
- P. A. Hill, Associate Professor of Geology—to do evaluation and compilation of European offshore mineral deposits, exclusive of oil and gas, at the Department of Geology and Sedimentological Research Laboratory of the University of Reading, England
- A. T. Hodge, Professor of Classics—to investigate possible development of decorative motifs in classical Greek architecture out of structural features, British School of Archaeology in Archaeology at College Year in Athens
- B. W. Jones, Associate Professor of English—on leave second term 1966-67. Leave to be spent in England studying Blake, Flaxman and late 18th Century literary and art history
- S. F. Kaliski, Professor of Economics—to undertake research in the extent of structural unemployment at various times in the post-war period, at the University of California
- S. R. Mealing, Associate Professor of History—to begin a study of Canadian higher education in the 19th century
- A. Nicholls, Assistant Professor of Psychology—to complete Ph.D. dissertation at the University of Waterloo
- J. Porter, Professor of Sociology—to undertake research in education and manpower at the International Institute for Labour Studies in Geneva, Switzerland
- G. Roseme, Assistant Professor of Political Science—to complete doctoral dissertation for the University of Washington
- W. R. Scott, Assistant Professor of Accounting—to undertake doctoral studies in Business Administration at the University of Chicago
- R. J. Semple, Associate Professor of Mathematics—to attend seminars on Algebraic Geometry at the Institut Henri Poincare, Paris, and to further his studies in the field of Homological Algebra
- D. A. Smith, Assistant Professor of Biology—to accept a Technical Assistance assignment in Uganda as a Professor of Biology (Zoology) in the Department of Agricultural Botany at Makerere University College, Kampala, and to carry out ecological studies of small mammals
- W. M. Tupper, Associate Professor of Geology—to study at the Institute of Geological Sciences, London, England

Resignations

Effective Academic Year 1965-66

Faculty

- E. A. Cherniak, Assistant Professor of Chemistry
- Phyllis M. Grosskurth, Lecturer in English
- P. J. Hickson, Assistant Professor of Physics
- K. Hirano, Assistant Professor of English
- A. H. Lightstone, Associate Professor of Mathematics
- H. Majmudar, Associate Professor of Engineering
- E. L. Matyas, Assistant Professor of Engineering
- J. S. Moir, Associate Professor of History

Administrative

- M. H. Atherton, Junior Cataloguer, Library
- J. M. Blue, Chief of Processing, Library
- W. Chang, Computer operator, Faculty of Engineering
- M. Cooper, Junior Reference Librarian

A. L. Holman, Chief of Public Services, Library
E. Komarnisky, Executive Secretary, Alumni Association
S. Osterbind, Senior Reference Librarian
B. C. Rombough, Cataloguer, Library
M. Schwarz, Assistant to the Registrar
A. Semple, Assistant Information Officer

Effective Academic Year 1966-67

Faculty

A. A. Barrett, Lecturer in Classics
D. Bedingfield, Lecturer in English
N. M. Brice, Assistant Professor of Engineering
K. A. Frenzel, Assistant Professor of Economics
H. S. Gordon, Professor of Economics
J. M. Hems, Assistant Professor of Philosophy

K. Kitchen, Assistant Professor of Political Science
D. McDougall, Associate Professor of Economics
G. F. Schaefer, Assistant Professor of Political Science
R. A. C. Stewart, Lecturer in Psychology
G. E. Tanyi, Assistant Professor of Mathematics
M. J. Taylor, Lecturer in History
M. Trudel, Professor of History and a Director of the Institute of Canadian Studies
K. Van Dalen, Assistant Professor of Engineering

Administrative

S. Anderson, Senior Reference Librarian
M. Cooper, Junior Reference Librarian
I. Mawhinney, Cataloguer, Library

Research

FACULTY OF ARTS

DIVISION I

Classics

A. T. HODGE

Studies in classical Greek building
construction and connections
between decorative motifs and
structural features

T. R. ROBINSON

Continuing research on later career
of Alexander the Great

English

A. M. BEATTIE

Continuing study of Henry James as
historian and critic of English
society 1880-1914

M. HANNA

Work on John Bromyard's *Summa
Predicantium*
Currently translating *A la recherche
des traditions bancaires de l'Oc-
cident méditerranéen* by Danielle
Giry for publication by Nelson

T. J. HENIGHAN

The Idea of Nature in the Modern
Novel

Nature and Convention in Hughes'
A High Wind in Jamaica
Leisure and Frivolity in *A Handful
of Dust*

A review of *Israel Zangwill* by
Maurice Wohlgelernter

M. LAFRANCE

A critical study of the work of
Stephen Crane
Editing a collection of critical essays
on American literature

A. D. McLAY

Doctoral dissertation for the Uni-
versity of Wisconsin, "A com-
parative study of the *Life of St.
Thomas of Canterbury* by John of
Salisbury and other twelfth-
century Latin Lives"

J. STEELE

A biography of Edmund Waller

A. T. TOLLEY

Investigation of the early published
and unpublished poetry of British
poets of the 1930's

D. J. WURTELE

Continuing research on doctoral
dissertation for McGill Univer-
sity, "Rhetorical and Psycho-
logical Decorum in Chaucer's
Canterbury Tales"

History

D. G. BOWEN

The Idea of the Victorian Church,
McGill and Leicester University
Press for publication, Fall, 1966
*Resident Gentlemen: The Clergy of
dioceses of Killala and Achonry in
the Established Church During the
Great Famine*, Mercier Press,
Cork, for publication, 1966

N. COOPER

Doctoral thesis for Harvard Univer-
sity, "The Relations of English
Congregationalists and Baptists
with the State and the Church
of England, 1832-1897"

M. G. FRY

Preparation of a study of David
Lloyd George and the conduct
of British foreign policy, 1899-
1945

R. B. GOHEEN

Completing doctoral dissertation
for Yale University on Early
Tudor Peerage

N. E. S. GRIFFITHS

Research in New Brunswick on
19th century Acadian life
Research in Baton Rouge, La., on
20th century Acadian life in
Louisiana

*Research on Acadian studies in
the United States, visiting capitals
Maine to Louisiana, 10 May to
10 July, 1966

T. M. HUNTER

Assisted in preparation of Grade XII
text in modern history for The
Ryerson Press

P. J. KING

Work on a book "Utilitarian Juris-
prudence in America: The In-
fluence of Bentham and Austin
on American Legal Thought in
the Nineteenth Century"

The political ideas of Daniel De
Leon and the American Socialist
Labour Party, 1890-1914

John Codman Hurd's theories of
the Union and Reconstruction

F. OUELLET

Preparation of volume for the
Canadian Centenary Series:
*Ethnic Conflicts in Lower Canada,
1791-1840*

Research for volume *Economic and
Social History of Quebec, 1760-
1850*

J. W. STRONG

Editor of volume based on the
television lecture series "An
Introduction to Soviet Russia"

M. TRUDEL

Sur la periode 1627-1663, pour le
volume III de l'*Histoire de la
Nouvelle-France*

Reconstitution de *Dictionnaire bio-
graphique des esclaves du Canada
français et de leurs propriétaires*

Reconstitution de collection de
cartes nord-américaines du seizi-
ème siècle

Recherche pour *Initiation à l'étude
de la Nouvelle-France (histoire et*

institutions), manuscrit de 400
pages remis à l'éditeur Holt,
Rinehart et Winston, pour
publication

Journalism

W. EGGLESTON

Research for a history of the
National Research Council

W. H. KESTERTON

Research for a book, *A Brief
History of Canadian Journalism*

T. J. SCANLON

Rewriting master's thesis for
Queen's University for publica-
tion: federal government
information services

Preparing manuscript on history of
football at Carleton University

Modern Languages

F. ATIENZA (Spanish)

Preparing a critical edition and
study of Unamuno's poetical
work "El Cristo de Velázquez"

A. ELBAZ (French)

Doctoral thesis for Sorbonne Uni-
versity, Le thème du mariage
mixte chez les romanciers juifs
américains et français, après la
Deuxième Guerre Mondiale

Trends of modern Hebrew literature
in Israel, and the possible in-
fluence of the French literature
on the Israeli writers

C. FLEISCHAUER (French)

A critical edition of *Les Trois
Imposteurs*

A variorum edition of Voltaire's
poetry

M. FURSTENWALD (German)

Preparing dissertation on Gryphius'
Funeral Orations for publication
by Bouvier, Bonn

R. D. GOULD (German)

Doctoral dissertation for Princeton
University on interrelationships
between Goethe's scientific and
literary work

R. L. JACKSON (Spanish)

Miscegenation and personal choice
in two contemporary novels of

- continental Spanish America:
R. Gallegos, *Pobre Negro* and
E. López Albújar, *Matalaché*
Notas sobre *Los de abajo* y *La*
negra Angustias
- *The image of the Negro in Colonial
Spanish American literature
The Negro in the contemporary
novel of Continental Spanish
America
Some considerations on Carlos
Fuentes' *La región más trans-
parente*
Estudios recientes rubendarianos
El negro en la vida y obra de
Rubén Darío
Petrarca, Ronsard y Rubén Darío
The survey course in Spanish
American literature today: prob-
lems and procedures
Apuntes sobre la lengua greguerís-
tica en la poesía contemporánea
hispanoamericana
The surrealist image in the greguería
of Ramón Gómez de la Serna
Antecedents and originality of the
greguería of Ramón Gómez de
la Serna
- J. JURADO (Spanish)
Completed preparation of the
critical edition of the work by
Juan P. Forner: *Los Gramáticos.*
Historia Chinesca. With intro-
ductory study
- W. B. KAY (French)
Preparing a study of the 17th cen-
tury dramatist, Jean Mairet
Doctoral dissertation for University
of California at Los Angeles,
The Theatre of Jean Mairet: the
Metamorphosis of Sensuality,
June, 1965
- E. F. KAYE (French)
Research for publication of a
critical edition of the memoirs
of Xavier Marmier
- E. KUSHNER (French)
A book on Saint-Denys Garneau
"Pontus de Tyard: l'homme et
l'oeuvre"
Aspects of the European influence
of John Amos Comenius
- P. LAURETTE (French)
Paul Valéry et l'Europe
Paul Valéry et Kant
- La technique de l'image dans la
poésie de Valéry
Paul Valéry et le Monde Slave
- G. MELNIKOV (Russian)
Soviet literature since the fall of
Khrushchev
- J. MIQUET (French)
Doctoral thesis for University of
Poitiers, preliminary work on the
"Roman en prose de la Châtelaine
de Vergi"
- R. RAVANO (Spanish)
Additional research on a vocabu-
lary in English, Spanish, French
and German, to provide teachers
and students with words and
expressions most widely used in
normal speech and reading. Each
concept has an indication of its
frequency of usage for each
separate language and an estimate
of the average frequency for all
four languages
Special idioms of the Spanish
language
- J. S. TASSIE (French)
Grammatical characteristics of
Canadian French
- P. VARNAI (Russian)
Stylistic problems in 19th century
Russian literature, for Ph.D.
thesis for the University of
Toronto
- Philosophy*
D. GOLDSTICK
Practical Refutation of Empiricism
- J. W. LEYDEN
The role of analogy in theory con-
struction in physics
- R. S. TALMAGE
Work on a book, *Thought, Cause*
and Desire
- B. WAND
Some parallels between the concepts
of religion and the concepts of
morality
- J. C. S. WERNHAM
Two Russian Thinkers: A Study
on Berdyaev and Shestov

Psychology

E. J. BURWELL

- *Role of educational environment in shaping ability patterns, pattern of abilities of Jewish day school students, a follow-up after five years of children seen when they were in Grade I

M. N. DONALD

- *Attitude structure and change
- *Study of a generation of Carleton University students (with H. Burshtyn, M. C. Frumhartz, and B. A. McFarlane)
- *The self concept

P. D. MCCORMACK

- *Eye-movements and verbal learning

R. A. C. STEWART

Personality correlates of academic achievement

L. H. STRICKLAND

The relationship between need for approval and components of the "assumed similarity between opposites" score
Eye movements in the impression formation process

F. R. WAKE

Effect of family discipline on cruelty
Methods involved in the termination of the smoking habit
Challenge to maturity in teenagers

W. E. WALTHER

- *Emotional stress and coronary artery disease
- *Psychological aspects of coronary heart disease: a review of epidemiological factors
- Variables affecting behaviour in a self administered conflict situation

Religion

G. W. RAMSEY

The Use of Prediction by the Old Testament Prophets

L. M. READ

The Incarnation in the Thought of Hegel and Kierkegaard

DIVISION II

Economics and Accounting

T. N. BREWIS (Economics)

Continuation of book "Area Economic Development: A Study of the Canadian Scene"

R. CATERINA (Accounting)

Financial Reporting by Canadian Financial Institutions

W. I. GILLESPIE (Economics)

A Note on the Incidence of the 1966 Ontario Tax Changes
A comparison of fiscal incidence in Canada and the United States
An examination of the theory of non-private goods
Fiscal federalism

H. S. GORDON (Economics)

Continuing research on the history of the political and economic theory of economic policy, 1815-1914

K. A. J. HAY (Economics)

Relation of money to Canadian economic activity
Education and economic growth

N. H. LITHWICK (Economics)

Urban Economics (with G. Paquet)
Royal Commission on Taxation

G. PAQUET (Economics)

Urban Economics (with N. H. Lithwick)
Economics of uncertainty
Structuralism
Economics of planning
Canadian economic development

T. K. RYMES (Economics)

Ph.D. thesis for McGill University, "Theory of Capital"

Geography

D. M. ANDERSON

Study of shoreline recreational use and potential on the Rideau waterway
Doctoral thesis for Michigan State University on areal organization of Danish agricultural production

J. P. JOHNSON, JR.

Geomorphological Research in the Icefield Ranges, Yukon Territories, Summer, 1965

G. C. MERRILL

*Study of the land development program in coastal Guyana

Political Science, Public Administration, and Public Law

R. D. ABBOTT (Public Law)

Decision procedures of federal administrative tribunals

Linguistic aspects of the legal systems in the National Capital Region, and linguistic and cultural aspects of the exercise of provincial power in the National Capital Region, for the Royal Commission on Bilingualism and Biculturalism

A. BROMKE (Political Science)

Co-editing a volume on *The Communist States and the West*
Preparing a paper on Polish-Czech relations

R. J. JACKSON (Political Science)

Completing paper, "Attitudes of Canadian Political Scientists"

Beginning research on book, *The Canadian Cabinet*

Research for the Privy Council
Office on Government Procedure

F. J. E. JORDAN (Public Law)

Compilation of an Annotated Digest of Primary and Secondary Documentation relating to the Establishment and Development of the International Joint Commission (Canada-United States) 1909, for Canadian Section, International Joint Commission

Work on doctoral dissertation in Law for University of Michigan, "The Changing Role of the International Joint Commission (Canada-United States): 1912-1966"

P. V. LYON (Political Science)

Canadian foreign and defence policy, 1961-63, a study for the Canadian Institute of International Affairs

R. O. MACFARLANE (Public

Administration)
Training of Public Servants in Administration

R. A. MACKEY (Political Science)

Editing documentary material on Canadian External Relations since 1945

R. R. MARCH (Political Science)

Research on Canadian Political Science (with R. J. Jackson)

Project on The Carleton Constituency Voter, 1965 Canadian General Election, *Weekend Magazine*, 11 December, 1965, (with T. J. Scanlon)

Research consultant to the Royal Commission on Bilingualism and Biculturalism

K. Z. PALTIEL (Political Science)

Political Finance and Election Expenses

Activities and Organization of Royal Commissions in Canada

D. C. ROWAT (Political Science)

Book on Canadian local government for *The Carleton Library*

G. F. SCHAEFER (Political Science)

Research Consultant to Royal Commission on Bilingualism and Biculturalism

Completed Ph.D. dissertation for Vanderbilt University, "Political Disobedience: An Analysis of the German Resistance to Hitler"

M. STEIN (Political Science)

Ph.D. dissertation for Princeton University, "Political Attitudes and Party Dynamics: the Ralliement des Cr ditistes of Quebec"

Behavioral Study of the Canadian Cabinet, (with R. J. Jackson)
"Other Ethnic Groups", part of a book to be published by the Royal Commission on Bilingualism and Biculturalism

H. VON RIEKHOFF

NATO: Transformation of Alliance Policy, continuation of Canadian Institute of International Affairs—School of International Affairs

Sociology

H. BURSHTYN

- *Responses of the social environment to academic failure and emotional problems; part of a larger study of a generation of Carleton University students

B. A. MCFARLANE

- *The Carleton Student Study (with H. Burshtyn, M. N. Donald, and M. C. Frumhartz)

The Recruitment, Education and Present Conditions of Employment of Architects in Canada
The Engineering Technician: A Study in Occupational Status

P. C. PINEO

Public Evaluations of Occupations in Canada (with J. Porter)
Social Consequences of Urban Renewal
Communications in Resource Development (with D. R. Whyte)

J. PORTER

Public Evaluation of Occupations in Canada (with P. C. Pineo)
Completion of *Canadian Social Structure: A Statistical Profile for The Carleton Library*

V. F. VALENTINE

A study of Treaty Indian leadership and Band political organization
Culture and Communication

F. G. VALLEE

"Leadership and Decision Making on Indian Reserves in Canada" continuing research, (with H. B. Hawthorn, and others)
Review and Analysis of Research Findings Pertaining to Aspects of Indian-Eskimo Integration in Canadian Society for Royal Commission on Bilingualism and Biculturalism

D. R. WHYTE

Analysis of data on student intellectual self-identification, and factors related to perceived anti-intellectualism

FACULTY OF SCIENCE

Biology

J. M. ANDERSON

- *The effects of insecticides on the physiology of brook trout, Atlantic salmon, and crustaceans; electrophysiological studies of the lateral line nerve and the hypothalamus in salmonids, (with four Ph.D. and two M.Sc. candidates)

C. A. BARLOW

- *A study of the effects of environmental factors and physiological states on locomotion and orientation of insects. II. Influence of DDT on the photic orientation of the grain beetle, *Sitophilus granarius*, (L.)
- The effects of climatic, biotic, and physical factors on the distribution, abundance, and seasonal activity of insects in Gatineau Park

T. W. BETZ

- *The role of the hormones of the anterior pituitary gland in the metamorphosis of the chick embryo

J. P. FLETCHER

Experiments to study the role of 5-hydroxytryptamine on the movement of calcium ions into smooth muscle are in the preliminary stage

W. I. ILLMAN

- *Study of early infection stages of anthracnose fungi
- *Tryptophane metabolism of mycorrhizal fungi
- *Study of a 19th century collection of British Marine Algae

P. E. LEE

- *The characterization of insect-transmitted viruses and insect viruses, involving the application of autoradiographic techniques at both the light and electron microscope level to determine the

sequence of events in the development of wheat streak mosaic virus (a mite-transmitted virus) in infected plants, and Cross infection studies with two honey bee viruses: (i) acute bee paralysis virus, (ii) and sacbrood virus of the larval honey bee. Infection studies are conducted in a controlled environment using royal jelly as a medium for virus inoculum

H. H. J. NESBITT

- *Factors affecting the hypopial stage in Acarid mites
- *Further studies on the distribution and incidence of predaceous mites of the family Phytoseiidae in Eastern Canada

G. SETTERFIELD

- *Cytological and cytochemical studies of growth and development in plant cells
- *Cytological and cytochemical studies of cellular changes in stored tuber and fruit tissues

D. A. SMITH

- *Taxonomy, distribution, ecology and physiology of Ontario deer-mice (*Peromyscus*)

Migration and longevity of bats
Ectoparasites of small mammals
Survey of status of Arctic birds of prey

J. A. WEBB

- *Sugar transport in plants, using radioactive tracers
- *Cytology of phloem tissue using the electron and light microscopes in conjunction with tissue autoradiography
- *Biosynthesis of tri- and tetrasaccharides in plant tissue and their biochemical relation to the photosynthetic mechanism
- *Distribution of sugars in plant materials as related to physiological age

Chemistry

C. H. AMBERG

- *Studies of adsorption and charge transfer on semiconductors by an infrared transmission method
- *Studies in catalytic desulphurization

J. W. APsIMON

- *Structural and synthetic natural product chemistry
- *Nuclear magnetic resonance and stereochemistry
- *Organic photochemistry

C. L. CHAKRABARTI

- *Studies on sensitivities and selectivities in atomic and molecular absorption spectroscopy
- *Determination of some transition elements by atomic absorption spectroscopy
- *Spectrophotometric determination of tellurium as $\text{Te}(\text{DDTC})_4$ complex, extracted into chloroform or carbon tetrachloride

J. M. HOLMES

- *Measurement of isosteric heats of adsorption of oxygen, nitrogen, argon, carbon monoxide and SF_6 on graphitized carbon blacks
- *Continuation of project on adsorption calorimetry

J. A. KONINGSTEIN

Theoretical Chemistry: Configuration Interaction and Crystal field calculations of trivalent Rare Earth ions

Spectroscopy: Molecular spectroscopy on the $\text{CuCl}_4^{=}$ ion; Electronic Raman effects; Intermolecular Interactions and Raman Intensities, (with H. J. Bernstein)
Detection of weak light signals in the presence of noise, (with E. Gassner)

P. KRUIJS

- *Investigation of interactions in liquid mixtures by viscosity, and ultrasonic absorption and velocity
- Cavitation-induced reactions in liquids
- *Electronic-vibrational energy transfer in the quenching of mercury, (with J. C. Polanyi)
- Self-absorption of vibration-rotation emission lines of HCl

P. M. LAUGHTON

Secondary deuterium isotope effect on acidities

Solubility of nonelectrolytes in light and heavy water
Gas hydrates in D₂O
Carotenoids, (with W. I. Illman)

M. PARRIS

- *Peptide hydrolysis catalysed by cobalt (III) complexes
- *Hydrolysis of chloropentakis (methylamine) cobalt (III) ion
- *Exchange of chromous ion with chromic benzyls

C. S. TSAI

- *Mechanism of spontaneous decarboxylation of oxalacetate
- *Effect of ligands on the metal catalyzed decarboxylation of oxalacetate
- *Isolation of oxalacetate decarboxylase

R. H. WIGHTMAN

- *Dimethyl Sulfoxide as an oxygen-donor
- *Stereospecific Syntheses of tri-substituted olefins
- *Synthesis of the perhydroazulenic system via aldehydic cyclizations

D. R. WILES

- *Experimental and theoretical studies of nuclear reactions in ionic and molecular solids
- *Ligand-catalysed electron exchange reactions

Geology

G. Y. CHAO

The crystal chemistry of phosphate minerals
Studies of the nepheline syenite minerals from Mt. St. Hilaire, Que.
Geikielite from Wakefield, Que.

P. A. HILL

Geology of the Arnprior area, Ontario
The onshore and offshore mineral resources of Canada: compilation and evaluation
Gregarious geology: its manifestations and limitations: with case histories

K. HOOPER

- *Foraminifera of eastern Canada

J. M. MOORE

- *Petrology and structure of Grenville Metamorphic rocks, south-eastern Ontario Petrology of Thor-Odin gneiss dome, Monashee Mountains, British Columbia
- *Petrochemistry of granulite facies rocks, Ontario and Quebec
- Aluminosilicate mineralogy of metapelites

W. M. TUPPER

- *Geology and geochemistry of sulfide deposits at Bathurst, N.B., Murdochville, Que., and Rio Tinto, Spain
- Behaviour of metals in the exogenic cycle, particularly in Keno Hill area, Yukon Territory, and northern New Brunswick, and their application to exploration problems
- Development of methods in geochemistry
- Relation between trace elements in water and soils and the health of humans

R. W. YOLE

- *Stratigraphy, sedimentology and palaeontology of the Sicker Group, Vancouver Island
- *Sedimentary petrology of Palaeozoic rocks of southern and eastern Ontario
- Geological aspects of seismic recording efficiency at Canadian seismograph network stations
- Sedimentology of Mesozoic clastic sediments of Arctic Archipelago

Mathematics

C. W. L. GARNER

Completing an enumeration of compound honeycombs in hyperbolic spaces, an extension of the Ph.D. thesis work for the University of Toronto

J. E. GRAHAM

Continuing a study of long term trends and seasonal variation in wheat yields in the Prairie Provinces
Aerial survey of the Nova Scotia moose population (with the Department of Northern Affairs and National Resources)

E. NORMINTON

An investigation of the diffusion and connection of heat and circulation in known potential flow fields

F. H. NORTHOVER

Continuing work on *Diffraction Theory* for Academic Press

B. M. PUTTASWAMIAH

Lattice characterization of finitely generated groups

M. RAHMAN

The relaxation processes in a slightly inhomogeneous plasma not far from equilibrium, (with M. K. Sundaresan)

The investigation of the non-linear properties of a vlasov plasma

D. W. SIDA

Investigation into the production of craters by high energy impacts: applications of shock waves to astro-physical problems

G. E. TANYI

"On a class of Elementary Solutions in Continuum Mechanics"

Physics

T. J. S. COLE

*Geochronology by K-A and Rb-Sr methods

*Isotope Geology of Sulphur

A. C. GHOSH

(n, α) reaction in selected nuclei

J. E. HARDY

Further analysis of Foldy-Wouthuysen transformation

E. P. HINCKS

*Measurements of the "X-Rays" from Muonic Atoms, (with C. K. Hargrove, R. D. Barton and J. McAndrew; H. L. Anderson and R. W. McKee)

*Spark Chamber Spectrometer Study of p + p Interactions at 12.5 GeV, (with H. L. Anderson and D. Kessler; S. Fukui; P. I. P. Kalmus; N. K. Sherman; and R. L. Martin)

*Gamma-ray studies with a lithium-drift germanium spectrometer

M. K. SUNDARESAN

Investigations in the processes of coulomb excitation by negative muons and of inverse internal conversion in an attempt to explain some of the nuclear gamma rays appearing in muonic x-ray experiments

FACULTY OF ENGINEERING

G. W. BIGG

Study of some non-linear effects in shells

M. A. COPELAND

Characteristics of magnetic materials and applications to engineering devices

The permanent magnet hysteresis machine

G. D. CORMACK

Determination of the characteristics of an electromagnetic shock tube
Electromagnetic phenomena in mismatched transmission lines

J. B. FORREST

Investigation of load-deformation characteristics of muskeg (peat)

D. A. GEORGE

Optimization of communication channels

Preparation of a manuscript on "Statistical Communication Theory" for John Wiley and Sons, Inc.

J. GOLDAK

Design and construction of a 130KV electron beam system capable of attaining power densities up to 10^{10} watts/cm² and a new type of x-ray fluoroscope that is expected to reduce the patient's radiation dose by a factor of one thousand
Developing diffraction methods to study the structure of crystals that transform before reaching room temperature and pressure

M. A. GULLEN

Automated design of two classes of electronic circuits

R. C. G. HAAS

- Stability characteristics of bituminous paving mixtures
- Pedestrian traffic models for tunnel systems
- Layer analysis of pavement systems
- Performance characteristics of asphalts
- Effects of de-icing chemicals on concrete deterioration
- "The Role of the Police officer in a Multiple Approach to Highway Accident Investigation"
- "Guides to Planning the Intensity of Subsurface Investigations for Buildings", (with D. W. Devenny)
- "Shear Strength Characteristics of Asbestos Modified Asphalt Mixtures", (with C. W. Smith)

D. A. J. MILLAR

- Flow and pressure distribution near rotating disks in housings, with radial through-flow
- Flow and flow stability in an annulus, with swirling flows and rotating walls—design and construction of test facility
- Numerical analysis of the freezing process in a liquid metal flowing in a narrow slot
- Development of a pulsed electromagnetic pump for molten high-temperature alloys

W. WRIGHT

- Study of ultimate strength of multi-storey rigid frames of steel

Publications by members of staff, and papers read before professional societies, etc., during 1965-66 or period of connection with Carleton if not previously reported

Publications and Papers

FACULTY OF ARTS

DIVISION I

Classics

A. T. HODGE

"Roman Waterworks", Association of Municipal Electrical Utilities, Ottawa, 10 June, 1966

"Science and Technology in the Ancient World", Regional Conference of High School Teachers, Pembroke, 29 October, 1965

Lecture series "Ancient Society"
CTV "University of the Air",
January-April, 1965

English

C. HAINES

Introduction to Jonathan Swift:
Gulliver's Travels, Edizioni per
Il Club del Libro, Milan, Italy,
1965, pp. 5-35, (in Italian)

Introduction to Daniel Defoe:
Robinson Crusoe, Edizioni per
Il Club del Libro, Milan, Italy,
1966, pp. 5-25, (in Italian)

M. LAFRANCE

"Stephen Crane's *Private Fleming: His Various Battles*", a public lecture presented in the American Authors series, Carleton University, 19 November, 1965

J. STEELE

"Rationale for War in Vietnam",
Conference on Canada's Role in
Vietnam, Toronto, 19 February,
1966; Teach-in, University of
Ottawa, 2 March, 1966; public
meeting, Windsor, 28 April, 1966
"The Study of Literature in English-

speaking, Canadian universities:
some patterns and approaches",
The English Centre, University
of Havana, 26 May, 1966

A. T. TOLLEY

"Conrad's Favourite Story":
Studies in Short Fiction, Vol. III,
No. 3, Spring, 1966, pp. 314-320

History

D. G. BOWEN

"Beyond the Fringe", Distinguished
Visitor, Dublin University, Theo-
logical Society, 31 January, 1966

"New Reformation", Ecumenical
Preacher, Trinity College Chapel,
Dublin, 6 February, 1966

"Dean Swift and Social Responsi-
bility", Select Preacher, St.
Patrick's Cathedral, Dublin,
27 February, 1966

"The Passion", Holy Week Mission,
St. John's, Clontarf, 3-8 April,
1966

"The Nature of Man", Teach-in,
Trinity College, Dublin, 15 April,
1966

"The Example of Moses Mendell-
sohn", address to the Diocese of
Cork, 18-19 April, 1966

"Reform in the Church of Ireland",
address to the Clergy of the
Diocese of Ferns, Cathedral of
St. Iberius, Wexford, 26 April,
1966

"Christianity and Humanism",
Dublin University Student Chris-
tian Movement Weekend Seminar,
Townley Hall, Drogheda, 30
April - 1 May, 1966

"Ferment in the Church", Criterion
Club of Dublin, Moira Hotel,
29 April, 1966

- "Liturgical Revival", Finglas
Deanery Dinner, 24 May, 1966
- "The Faith and the Arena", radio
broadcast, Radio Firann, 24
April, 1966
- "Anglo-Catholicism in Victorian
England", *Canadian Journal of
Theology*, January, 1966, Vol.
XIIe, pp. 35-49
- "The Church with a Ghetto Men-
tality", *Canadian Churchman*,
January, 1966, p. 7; "Growls
from the Ghetto", *ibid.*, June,
1966, p. 6
- "Church and the Secular World",
Church of Ireland Gazette:
August, 1965, pp. 4-11; "Clergy
and the New Morality", *ibid.*,
19 November, 1965, pp. 4-11;
"Set the Bishops Free", *ibid.*,
3 December, 1965, p. 6; "Problem
of Ballymacslap", *ibid.*, 11 Feb-
ruary, 1966, p. 5
- Book Review, *Chartist Portraits*,
G. D. H. Cole, The Macmillan
Company of Canada Ltd., 1965,
Canadian Journal of Theology,
Vol. XII, January, 1966

D. M. L. FARR

Acting General Editor, *The
Carleton Library*

M. G. FRY

- "The Imperial War Cabinet, the
United States and the Freedom
of the Seas", *The Royal United
Service Institution Journal*, Vol.
CX, November, 1965, pp. 353-362
- "Anglo American-Canadian rela-
tions, with special reference to far
eastern and naval issues 1918-
1922", *Bulletin of the Institute of
Historical Research*, May, 1966,
Vol. XXXIX, No. 9, pp. 110-113
- Book Review, *Lord Salisbury and
Foreign Policy. The Close of the
Nineteenth Century* by J. S. A.
Grenville, The Athlone Press,
University of London, 1964,
Canadian Journal of History,
Vol. 1, No. 1, April, 1966,
pp. 116-117
- Book Review, *Vain Endeavour:
Robert Lansing's Attempts to End
the American-Japanese Rivalry*,
by B. F. Beers, Duke University
Press, 1961, *Canadian Historical
Review*, June, 1965, Vol. XLVI,
No. 2, pp. 165-166

N. E. S. GRIFFITHS

- Eight lectures on "Background to
a Nation" in the CTV television
series, "University of the Air",
1965-66
- A British edition of *Studying
History*, Methuen, 38 pp.
- "Acadian Petitions in Exile", Public
Archives of Canadian Historical
Association, February, 1966

T. M. HUNTER

- "Sir George Bury and the Russian
Revolution", *Report*, 1965 of the
Canadian Historical Association,
pp. 58-70

P. J. KING

- "John Neal as a Benthamite", *New
England Quarterly*, Vol. XXXIX,
March, 1966, pp. 47-65
- Revised Canadian-American Biblio-
graphy for reprint of J.B. Brebner,
*North Atlantic Triangle, The
Carleton Library*, No. 30, McClel-
land and Stewart, Toronto, 1966,
pp. 338-357
- Book Review, *Montcalm and Wolfe*,
by Francis Parkman, The Ryer-
son Press, Toronto, 1964, *Can-
adian Geographical Journal*, Vol.
LXXI, August, 1965, pp. v-vi
- Eight lectures on "Background to a
Nation", CTV television series,
"University of the Air", Sep-
tember-December, 1965

S. R. MEALING

- "The Idea of Social Class and the
Interpretation of Canadian His-
tory", *Canadian Historical Review*,
Vol. XLVI, September, 1965,
pp. 201-218

H. B. NEATBY

- "William Lyon Mackenzie King",
*Canada's Past and Present: A
Dialogue*, R. L. McDougall, ed.,
University of Toronto Press,
1965, pp. 1-20

F. OUELLET

- L'échec du mouvement insurrection-
nel (1837-39)*, in *Recherches
sociographiques*, 1965, pp. 135-161
- Communication au Congrès inter-
national des Sciences historiques
à Vienne sur le nationalisme
canadien-français dans la cadre

des reunions de la commission internationale d'histoire des structures sociales et des mouvements sociaux, 27 août, 1965

Communication au Congrès de la Société historique du Canada à Sherbrooke sur les relations entre histoire et sociologie, 9 juin, 1965

J. W. STRONG

"Imperial Russia's Heritage of Revolution", "The Russian Revolution of 1917", and "Soviet Russia's Relations with China", lectures on "Background to a Nation", in the CTV television series, "University of the Air", January and May, 1966

"Continuity and Change in Soviet History", Ottawa High School History Teachers' Association, 7 June, 1966

"Russian Efforts to Rescue the British Agents Stoddard and Conolly from Bukharan Captivity in 1841-42", Annual Meeting, Canadian Association of Slavists, 13 June, 1966

M. TRUDEL

Histoire de la Nouvelle-France, Vol. II: *Le comptoir, 1604-1627*, Montréal, les Editions Fides, 1966, pp. XLIX-554

"Canadian History Textbooks help to keep apart those two solitudes", meeting of the Ontario Secondary School Teachers' Federation, 18 February, 1966

"En route pour la Nouvelle-France", au Musée national, le 2 mars, 1966

"Isolation and French Canada", at the University of Toronto, 17 March, 1966

"Garneau, un siècle après", à l'Université d'Ottawa, le 29 mars, 1966

"Le livre, témoin d'une civilisation", au Salon du Livre de Montréal, le 31 mars, 1966

"Garneau, un siècle après", au congrès de la Fédération des Sociétés historiques, à Québec, le 7 mai, 1966

Journalism

W. EGGLESTON

Canada's Nuclear Story, Clarke, Irwin, Toronto, October, 1965, 368 pp.

W. H. KESTERTON

"Mass Media", *Canadian Annual Review for 1964*, University of Toronto Press, 1965, pp. 432-452

T. J. SCANLON

"How One Riding Voted—and Why", *Weekend Magazine*, 11 December, 1965, pp. 26-33. (Report of a survey done by Carleton students and with R. March)

Modern Languages

A. ELBAZ (French)

"Prophecy in Israel", Jewish Philosophy and Study Group, Ottawa, 13 April, 1966

"Orientals and Europeans in Israel", Young Judeac Club, Ottawa, 21 January, 1966

"Moroccan Judaism, the end of an era", Congregation Mahzikei Hadath, Ottawa, 27 February, 1966

M. GOBEIL (French)

"Entretien avec Jean-Paul Sartre" and "Dialogue avec Simone de Beauvoir" in *Simone de Beauvoir* by Serge Julien-Caffié, Paris, Gallimard, 1966, pp. 38-43 and 210-229

R. L. JACKSON (Spanish)

"An Underdeveloped Area (on the Negro in the 20th century novel of continental Spanish America)", *Hispania*, Vol. XLVIII, No. 4, December, 1965, p. 870

"Bibliografía de y sobre Carlos Fuentes", *Revista Iberoamericana*, Vol. XXXI, núm. 60, July and December, 1965, pp. 297-301

"An Aspect of the Metaphorical Technique in the Greguería of Ramón Gómez de la Serna", *Romance Notes*, Vol. VII, No. 1, 1965, pp. 9-12

"Toward a Classification of the Greguería", *Hispania*, Vol. XLVIII, No. 4, December, 1965, pp. 826-832

"History of a New Literary Genre: The Greguería of Ramón Gómez de la Serna", *Books Abroad*, November, 1965, pp. 415-417

"Sobre la definición de la greguería de Ramón Gómez de la Serna",

- Duquesne Hispanic Review*, año IV, núm. 3, 1966, pp. 163-165
- "La presencia de la greguería en la obra de García Lorca", *Hispanófila*, núm. 25, Fall, 1965, pp. 51-55
- "Beginning Spanish Instruction at Carleton University: An Effective Solution to the Methods Controversy?", *Canadian Modern Language Review*, Winter, 1966, pp. 24-35
- E. F. KAYE (French)
- "Guy de Maupassant", Rideau High School, Ottawa, February, 1966
- E. KUSHNER (French)
- "Alfred de Vigny's vision of history", *Bulletin of the New York Public Library*, Vol. LXIII, November, 1965, pp. 603-617
- "Théâtre et histoire chez Vigny", *L'Esprit créateur*, Fall, 1965, pp. 107-108
- French VII (20th Century) Bibliography No. XVII* (1964), (in collaboration). New York, French Institute, 1965, 415 pp.
- "Paul Wyczinski: Poésie et symbole", *Livres et auteurs canadiens* 1965, Montreal, April, 1966, pp. 107-108
- "L'invention poétique dans les *Hymnes* de Ronsard", Association of Canadian University Teachers of French, University of Sherbrooke, 12 June, 1966
- "Yvan Goll: deux langues, une âme", *Proceedings of the IVth Congress of the International Comparative Literature Association*, Vol. I, Mouton, The Hague, 1966, pp. 576-588
- "Le personnage d'Orphée chez Ronsard", *Actes du 8^e stage international des études humanistes*, Tours, 1966
- P. LAURETTE (French)
- Paul Valéry et Rilke*, doctoral thesis for the University of Sarrebrücken, Publication de l'Université de Sarrebrücken, 1962, 190 pp.
- "La Notion d'Influence chez Paul Valéry et Goethe", *Proceedings of the IVth International Comparative Literature Association*, June, 1966
- G. MELNIKOV (Russian)
- "Soviet Literature" Parts I and II, two lectures in the CTV television series, "University of the Air", March and April, 1966
- Comments on "Existence d'une écriture autochtone en terre slave avant le temps de Cyrille et Méthode" by G. Sotiroff, Canadian Association of Slavists, University of Sherbrooke, 14 June, 1966
- J. S. TASSIE (French)
- Book review, *Les trois coups à Montréal*, in *Livres et auteurs canadiens* 1965, Montreal, 1966, p. 122
- P. VARNAI (Russian)
- "The Hungarian Solzhenitsyn", *Canadian Slavonic Papers*, Vol. VIII, June, 1966, pp. 260-266
- "Nineteenth-Century Russian Literature" Parts I and II, two lectures in the CTV television series, "University of the Air", March, 1966
- Psychology*
- D. K. BERNHARDT
- "Psychology and Life Insurance", *Life Underwriters News*, 1965, Vol. LI, No. 9, pp. 26-27
- P. D. MCCORMACK
- "The evaluation of student achievement", *Canadian Education and Research Digest*, 1965, 5, pp. 77-82
- "Two-stage paired-associate learning and eye movements", *Science*, 1965, 148, pp. 1749-1750, (with E. J. Haltrecht)
- "Monitoring eye movements under two conditions of presentation of paired-associate materials", *Canadian Journal of Psychology* 1966, 20, pp. 155-160, (with E. J. Haltrecht)
- "Laborimeter performance of intellectually normal and subnormal children during learning and retesting", *Perceptual Motor Skills*, 1966, 23, pp. 43-46, (with A. H. Goldsman)
- L. H. STRICKLAND
- "Optional anonymity and political

- balloting", *Psychological Reports*, 1966, 18, pp. 115-120, (with F. J. Cowan)
- "Temporal orientation and perceived control as determinants of risk-taking", *Journal of Experimental Social Psychology*, 1966, 2, pp. 143-151, (with R. J. Lewicki and A. E. Katz)
- F. R. WAKE
- "Youth and Smoking", Canadian Cancer Society, Newfoundland Branch, 22 November, 1965; published in *Health*, Vol. XXXIV, No. 1, February, 1966, pp. 8-9, and in *Journal of the Canadian Association for Health, Physical Education and Recreation*, Vol. XXXII, No. 4, April-May, 1966, pp. 10, 31, 35
- "Socio-psychological aspects of cigarette smoking", Report to the Department of National Health and Welfare, January, 1966, (with R. J. Moore and B. S. Booth)
- "Physical cruelty in male juvenile delinquents", *Canadian Psychologist*, Vol. VIa, No. 3, July, 1965, pp. 241-245 (with K. L. Beattie and A. J. King)
- "We Can Do Better Than Fear", Canadian Cancer Society, Newfoundland Branch, 23 November, 1965
- "A Comparison of physical cruelty in rural and urban delinquent boys", Ontario Psychological Association, 4 February, 1966, (with K. L. Beattie and A. J. King)
- "Attitudes of parents toward the sex behaviour of their children and themselves", Symposium, Ontario Psychological Association, 3 February, 1966
- "Ethics in Child Psychology", Ontario Psychological Association, 4 February, 1966
- W. E. WALTHER
- "Time-out Behaviour under Schedules of concurrent Positive and Negative Reinforcement", Ontario Psychological Association, Ottawa, February, 1966, (with C. P. Stewart and R. Groves)

R. A. WENDT

- "The Perceptual Basis of Identification", Annual Meeting of the American Association of Questioned Documents Examiners, Ottawa, 16 August, 1965

Religion

G. W. RAMSEY

- "The Dead Sea Scrolls", public lecture at Carleton University, 14 October, 1965

DIVISION II

Economics and Accounting

T. N. BREWIS (Economics)

- Canadian Economic Policy (Revised Edition) Macmillan Co. of Canada, Toronto, 1965, 463 pp., T. N. Brewis *et al*

R. CATERINA (Accounting)

- A submission to the House of Commons Committee on Finance, Trade and Economic Affairs on Bill C-102, An Act respecting Banks and Banking, July, 1965, 19 pp. and appendix

W. I. GILLESPIE (Economics)

- The Incidence of Taxes and Public Expenditures in the Canadian Economy*, a study paper prepared for the Royal Commission on Taxation, the Queen's Printer, Ottawa, 1966, pp. 263

- A revision of "Public Finance" in *Encyclopedia Canadiana*, Grolier of Canada Ltd., Ottawa, 1966 7 pp.

H. S. GORDON (Economics)

- Canada: An Appraisal of Its Needs and Resources*, Twentieth Century Fund, University of Toronto Press, 1965, (with G. W. Wilson and S. Judek)

- An Assessment of the Role of the Economic Council of Canada and An Appraisal of its Second Annual Review*, Canadian Trade Committee, 1966

- "Recent Fiscal and Monetary Policy in Canada", York University, York, England, 4 November, 1966

"A Twenty Year Perspective: Some Reflections on the Keynesian Revolution in Canada", *Canadian Economic Policy since the War*, Canadian Trade Committee, 1966

"The Idea of Laissez Faire in Britain and the United States", York University, York, England, 6 November, 1964, and Economic History Seminar, London School of Economics, London, 27 November, 1964

"Recent Canadian Fiscal and Monetary Policy", Canadian Economy Seminar, Harvard University, 19 March, 1965

"The Historical, Economic, and Political Background of the Current Constitutional Crisis in Canada", Graduate Students Seminar, Brown University, Providence, R.I., 26 March, 1965

"A Twenty Year Perspective: Some Reflections on the Keynesian Revolution in Canada", in the series of lectures in commemoration of the White Paper on Employment and Income of 1945, Carleton University, 6 October, 1965, and Dalhousie University, 20 January, 1966

"Some Problems of Confederation", Dalhousie University, 20 January, 1966

"Some Notes on the History of the Theory of International Trade Policy", Staff and Graduate Students Seminar, University of Western Ontario, 2 December, 1965

"Central Bank Problems and Policy in Canada", symposium on Canadian and American Economic Relations, Niagara University, Niagara, N.Y., 14 May, 1966

K. A. J. HAY (Economics)

"Money and Banking", *National Banking Review*, April, 1965

"Trends in the location of industry in Ontario, 1945-1959", *Canadian Journal of Economics and Political Science*, August, 1965

"Early twentieth century business cycles in Canada", *ibid.*, August, 1966

"Money and Cycles in post-Confederation Canada", paper read at the meetings of the Canadian

Political Science Association, Sherbrooke, 10 June, 1966

S. F. KALISKI (Economics)

Editing and introduction for *Canadian Economic Policy since the War*, a series of six public lectures in commemoration of the twentieth anniversary of the White Paper on Employment and Income of 1945, the Canadian Trade Committee, Montreal, 1966

N. H. LITHWICK (Economics)

"Canadian Economic Growth", a study paper for the Royal Commission on Taxation

"Urban growth, urban development and urban land use", a paper given to the Canadian Political Science Association, Ottawa Branch, seminar on Urbanization in Canada, Ottawa, March, 1966, 77 pp. (with G. Paquet)

"Post-war production relationships in Canada", a paper given at the National Bureau of Economic Research, Conference on Production Relationships (with T. K. Rymes and G. Post)

G. PAQUET (Economics)

Critères de choix, Volume VII du Premier Rapport du Comité de Recherches sur l'Assurance-Santé Québec, Janvier, 1966

"Urban growth, urban development and urban land use", a paper given at the Canadian Political Science Association, Ottawa Branch, seminar on Urbanization in Canada, Ottawa, March, 1966, 77 pp. (with N. H. Lithwick)

"The structuration of a Planned Economy", *Canadian Slavonic Papers*, VIII, 1966, pp. 250-259

T. K. RYMES (Economics)

"The Economic Council: Capital, Employment and Growth", *The Business Quarterly*, Winter, 1965

"Post-war production relationships in Canada", presented at National Bureau of Economic Research Conference on Income and Wealth, New York, October, 1965, (with G. Post and N. H. Lithwick)

Geography

P. E. UREN

"Economic Relations Among the Communist States", *The Communist States at the Crossroads*, ed. A. Bromke, F. A. Praeger, New York, 1965, Chapter II, pp. 199-218

Editor, *East-West Trade*, The Canadian Institute of International Affairs, Toronto, 1966, 181 pp.

Political Science, Public Administration and Public Law

R. D. ABBOTT (Public Law)

"Administrative Discretion: An Overview", presented to Senior Course in Public Administration, Civil Service Commission, Carleton Place, 24 May, 1966

"Administrative Discretion: Tribunals", *ibid.*, 25 May, 1966

"Delegated Legislation and Administrative Law", presented to Senior Course in Public Administration, External Aid Office, Carleton University, 2-3 June, 1966

"Law in the Liberal Arts", *Canadian Legal Studies*, May, 1966, pp. 163-165

A. BROMKE (Political Science)

"Eastern Europe and the West", *The Federalist*, June, 1965, pp. 15-22

Paper on the political situation in Poland at the Fifth International Conference on World Politics in Noordwijk, Holland, 13 September, 1965

"Poland's Role in the Loosening of the Communist Bloc", *International Journal*, Autumn, 1965, pp. 484-509

Lecture on Poland, Russian and East European Studies Program, Yale University, 17 November, 1965

Lecture on Poland, Russian and East European Studies Centre, University of Toronto, 10 December, 1965

Lecture on Eastern Europe, National Defence College, 13 December, 1965

"Poland and France: The Sentimental Friendship", *East Europe*, February, 1966, pp. 9-15

"Communism and Political Realism in Poland", *Journal of International Affairs*, Winter, 1966, pp. 137-150

"The Two Alliances: Conflict and Interdependence", lecture in the Carleton University series, "The Communist States and the West", 11 February, 1966

"La France et la Pologne", *Témoignages*, mars-avril, 1966, pp. 2-10

"Die polnisch-französische Freundschaft", *Osteuropäische Rundschau*, April, 1966, pp. 10-14

"East-West Relations: Cold War or Détente", in Philip E. Uren (ed.), *East-West Trade*, Toronto, 1966, pp. 1-14

"The United States and Eastern Europe", *International Journal*, Spring, 1966, pp. 211-217

Lecture at the Czechoslovak Institute of International Affairs in Prague on East-West relations, 2 June, 1966

Editor, *Canadian Slavonic Papers*, VIII, University of Toronto Press, 1966, 277 pp.

R. J. JACKSON (Political Science)

Completed D.Phil. dissertation on *Party Discipline in Britain* for Oxford University, arranging for publication of thesis as book

P. V. LYON (Political Science)

"A Preview of the West German Elections", *Commentator*, Vol. IX, No. 9, September, 1965, pp. 3-4, 29

"The West German's Headache", *ibid.*, Vol. X, No. 2, February, 1966, pp. 11-13

"European Integration", lecture to the National Defence College, Kingston, 9 November, 1965

"The German Problem", lecture in the Carleton University series, "The Communist States and the West", 18 February, 1966

"American Policy in Vietnam", lecture to the Kirby Society, Lafayette College, Easton, Pa., 14 April, 1966

"Canada's Future in International Relations", paper read to the Ontario Young Progressive Conservative Conference, 14 May, 1966

"Discussion of 'Canada and Eastern Europe' ", *Canadian Slavonic Papers*, VIII, 1966, pp. 20-23
Occasional book reviews, *The Globe and Mail*

R. O. MACFARLANE (Public Administration)

Lectures for Civil Service Commission to Senior, Intermediate, and Junior Administrative Officers

Lectures in Public Administration to officers of Northern Affairs, Unemployment Insurance Commission

Lectures for Civil Service Commission to Personnel Officers, Management Improvement Officers

"Short Term Training Programmes for Senior Administrators", presented to International Institute of Administrative Sciences Congress, Paris, July, 1965

R. A. MACKAY (Political Science)

"On Survival in The Nuclear Age", *Transactions of Royal Society*, Vol. III, Section II, 1965, pp. 105-120

K. Z. PALTIEL (Political Science)

"The Research Program of The Canadian Advisory Committee on Election Expenses", paper read at the Airlie Conference on Political Finance, 12 September, 1965, sponsored by the International Study Group on Political Finance

"Vaalikustannukset ja niitä tutkivan nuvoa-antavan komitean toiminta Kanadassa", (The Canadian Advisory Committee on Election Expenses) *Politiikka*, Helsinki, Finland, December, 1965, pp. 1-10

"Les Commissions Royales D'Enquête", lecture presented on the CBC French network, December, 1965, 25 pp., (mimeo.)

"Democracy Within the Parties: The Problem of Party Finance", paper delivered at the Third Annual Conference on the Canadian Party System, Exchange for Political Ideas in Canada, Glendon College, York University, Toronto, 4 June, 1966

"Federalism and Party Finance: A Preliminary Sounding", paper presented at the 38th Annual Meeting of the Canadian Political Science Association, University of Sherbrooke, 8 June, 1966

P. L. ROSEN (Political Science)

"Othello: A Canadian Performance", paper presented at Carleton University Spring Conference, 16 May, 1966

D. C. ROWAT (Political Science)

The Ombudsman: Citizen's Defender, University of Toronto Press, Toronto; Allen and Unwin, London; Norstedt and Sons, Stockholm; 1965, 348 pp.

"How Much Administrative Secrecy?", XXXI, *Canadian Journal of Economics and Political Science*, November, 1965, pp. 479-498

"Administrative Secrecy and Ministerial Responsibility: A Reply", XXXII, *ibid.*, February, 1966, pp. 84-87

"The Duff-Berdahl Report" and "Democracy in the University Community", 14 *CAUT Bulletin*, April, 1966, pp. 23-30 and 36-42

"The Municipal System", a lecture presented in French translation on the CBC French network, January, 1966, 19 pp., (mimeo.)

M. STEIN (Political Science)

Article on the Dorion Inquiry, *Britannica Book of the Year*, 1966, p. 133

H. VON RIEKHOFF

"The Changing Function of NATO", *International Journal*, Vol. XXI, No. 2, Spring, 1966, pp. 157-172

Sociology

B. A. MCFARLANE

Dental Manpower in Canada, A Study for the Royal Commission on Health Services, The Queen's Printer, Ottawa, 1965, pp. XII, 217

"The Girls' and the Boys' World", with Oswald Hall in B. R. Blighen, F. E. Jones, K. D. Naegele and J. Porter, *Canadian Society*, 2nd

- edition, Macmillan of Canada, 1964, pp. 200-202
- "The Professional Engineer and his Career: A Socio-historical study", Engineering Institute of Canada, Professional Development Program, Ottawa Branch, 10 November, 1965
- "A Comparison of the Functions, Education, Training and Work Careers of Technicians in Industry in The Netherlands, Spain, Switzerland and Yugoslavia", Directorate for Scientific Affairs, Organization for Economic Co-operation and Development, Paris, 14 December, 1965
- "The Profession of Forestry: A Study in the Sociology of Occupations and Professions", Canadian Institute of Forestry, Ottawa Valley Section, January, 1966
- "Motivation and Public Relations", Public Relations Seminar, Canadian Public Relations Society, Ottawa Branch, 18 February, 1966
- "Social, Economic and Scientific Changes as they affect the Engineer and his Environment", panel discussion with J. Ruptash, J. Deutsch, Association of Professional Engineers of Ontario, Annual Meetings, Ottawa, 25 February, 1966
- "The Engineering Technician-Technologist and his Career in Industry", the Association of Certified Engineering Technicians and Technologists of Ontario, Annual Meeting, Toronto, 14 May, 1966
- "Motivation and the Meaning of Work", four lectures to the Colombo Plan Senior Officers Course, Carleton University, 6-9 June, 1966

P. C. PINEO

- "Living in Retirement", in Special Committee of the Senate on Aging, *Final Report*, 1966, pp. 157-168
- "Disenchantment in the Later Years of Marriage", reprinted in B. Farber, ed., *Kinship and Family Organization*, John Wiley and Sons, Inc., New York, 1966, pp. 229-239

- "Some Social Consequences of Urbanization", Canadian Political Science Association, Ottawa Chapter, February, 1966
- "Prestige of Occupations in Canada", Department of Labour (Manpower), April, 1966, (with J. Porter)
- "Occupational Prestige in Canada", Canadian Sociology and Anthropology Association, June, 1966, (with J. Porter)

J. PORTER

- "Occupational Prestige in Canada", paper read at annual meeting of Canadian Anthropology and Sociology Association, Sherbrooke, 11 June, 1966, (with P. C. Pineo)
- "Public Evaluation of Occupations in Canada", paper read at professional staff seminar, Department of Labour, Ottawa, 25 April, 1966, (with P. C. Pineo)
- "Aims and Problems in Canadian Society and Their Implications for Teacher Training", paper read at Seminar on Teacher Training, Canadian Teachers' Federation, Ottawa, 9 May, 1966
- "Social Change in Canada", address to Staff Training Conference, United Steelworkers of Canada, Niagara Falls, 2 December, 1965

V. F. VALENTINE

- "Poverty and Development among Canada's Indian, Metis and Eskimo Groups", Senior Course in Public Administration, Civil Service Commission, April, 1965
- "The Forgotten People" in Maja Van Steensel, *et al.*, *People of Light and Dark*, Queen's Printer, Ottawa, 1966
- "Co-operatives and Community Development in Four Caribbean Countries", United Nations, 1966

F. G. VALLEE

- "Eskimo Theories of Mental Illness", *Anthropologica*, Vol. VIII, No. 2, 1966
- "The Cooperative Movement in the Arctic", *North*, Vol. XIII, No. 3, 1966
- "Community Development in the North", in *People of Light and*

- Dark, Maja Van Steensel, et al, Queen's Printer, Ottawa, 1966
- "Administration and the Games People Play", *Junior Executive Officers Course*, Civil Service Commission, Ottawa, February, 1966
- "Automation and Trends in Work and Leisure", *Catholic Social Life Conference*, Ottawa, May, 1966
- "Social Science Research: Needs, Problems and Prospects", Indian-Eskimo Association Conference on Research, Planning and Coordination in the Canadian North, Montreal, June, 1966

D. R. WHYTE

- "Sociological Aspects of Poverty: A Conceptual Analysis", *Canadian Review of Sociology and Anthropology*, Vol. II, No. 4, 1965
- Social Determinants of Intercommunity Mobility: An Inventory of Findings*, Ottawa, 1965, prepared under contract with the Department of Forestry-ARDA
- Urbanization of Rural Canada*, paper presented at the Symposium on Social Change in Rural Canada, Levis, Que., November, 1965

FACULTY OF SCIENCE

Biology

C. A. BARLOW

- "Effect of zinc ions on mitosis in wing anlagen of *Ephesia kühniella* Z. in vitro", *Nature*, Vol. CCIX, No. 5027, 1966, pp. 1045-1046

T. W. BETZ

- "Correction of defects of partially decapitated ("hypophysectomized") white leghorn fetuses by anterior pituitary chorioallantoic grafts", *American Zoologist*, Vol. V, Abstract #130, 1965, p. 2232; presented to the American Institute of Biological Sciences, Urbana, Ill., August, 1965
- "A case of fatal cloacal tumor in a

snake", *British Journal of Herpetology*, Vol. III, 1965, pp. 199-201, (with H. M. Smith)

W. I. ILLMAN

- "The place of seaweeds in a general evolutionary theory for plants", International Seaweed Symposium, Halifax, 27 August, 1965

P. E. LEE

- "The ultrastructure of dimorphic spermatozoa in the hymenopteron *Dahlbominus fuscipennis*, (Zett.) (Eulophidae)", *Canadian Journal of Genetics and Cytology*, Vol. VII, No. 4, December, 1965, pp. 609-619, (with A. Wilkes)
- "Electron microscopy of inclusions associated with wheat streak mosaic virus", *Journal of Ultrastructure Research*, Vol. XIII, 1965, pp. 359-366
- "Sacbrood virus: Some morphological features and nucleic acid type", *Journal of Invertebrate Pathology*, Vol. VII, No. 4, December, 1965, (with B. Furgala)
- "Acute bee paralysis virus, a cytoplasmic insect virus", *Virology*, Vol. XXIX, June, 1966, pp. 346-348, (with B. Furgala)

H. H. J. NESBITT

- "The Morphology and Structure of the Brain of *Orconectes virilis* (Hagen) (Crustacea, Decapoda)", *Canadian Journal of Zoology*, Vol. XLIV, 1966, pp. 1-22, (with W. D. Seabrook)
- "Teilhard de Chardin, the Anthropologist", The Teilhard de Chardin Lecture Series, Sedes Sapientiae, St. Patrick's College, Ottawa, 18 March, 1966

G. SETTERFIELD

- "Histone protein changes in Jerusalem artichoke tuber tissue", presented to the Canadian Society of Plant Physiologists, Vancouver, June, 1966, (with G. Adams)
- "Structure and deposition of secondary wall in sclereids of *Rauwolfia*", presented to the Canadian Society of Plant Physiologists, Fredericton, June, 1965, (with A. J. Mia)
- "Structure and Deposition of Plant Cell Walls", paper delivered to

- the inaugural meeting, Canadian Society for Cell Biology, Queen's University, May, 1966, (with A. J. Mia and L. C. Fowke)
- D. A. SMITH
 "The recording and analysis (with film) of locomotory activity by small mammals and fish", *Animal Behaviour*, Vol. XIII, No. 4, 1965, pp. 583-584, (with K. C. Fisher, R. R. Langford, and J. A. McKenzie)
- J. A. WEBB
 "Canadian Plant Physiology", *Science*, Vol. CL, 1965, pp. 787-789 and in *Nature*, Vol. CCVIII, 1965, pp. 27-28
- Chemistry*
- J. W. APSIMON
 The constitution of ergoflavin, *Journal Chemical Society*, London, 4130, 1965, (with J. A. Corran, N. G. Creasey, K. Y. Sim, and W. B. Whalley)
 The constitution of ergochrysin A, secalonic acid A, and secalonic acid B, *ibid.*, 4144, 1965, (with J. A. Corran, N. G. Creasey, W. Marlow, W. B. Whalley, and (in part) K. Y. Sim)
 Some derivatives of 2, 4, 2', 4', tetrahydroxydiphenyl, *ibid.*, 4156, 1965, (with N. G. Creasey, W. Marlow, K. Y. Sim and W. B. Whalley)
 Aliphatic amides from ergot, *ibid.*, 4164, 1965, (with A. J. Hannaford and W. B. Whalley)
 The stereochemistry of the tetrahydropimaric acids, *Canadian Journal of Chemistry*, National Research Council, 43, 2793, 1965, (with P. V. Demarco and J. Lemke)
 "Stereochemistry of catalytic hydrogenation" presented to the Research Section, Bristol Laboratories, Syracuse, N.Y., October, 1965
 "Electron deficient nitrogen and oxygen in organic synthesis", University of Vermont, March, 1966
 "The selective oxidation of vinyl groups in the pimaric acids", 49th Canadian Chemical Conference, Saskatoon, 8 June, 1966, (with A. S. Y. Chau, W. G. Craig, and H. Krehm)
 The anisotropies of the C-C, C-H and C=C bonds, *Chemical Communications*, 359, 1966, (with W. G. Craig, P. V. Demarco, D. W. Mathieson, L. Saunders, and W. B. Whalley)
 The n.m.r. spectra of some diterpenes, *Chemical Communications*, 361, 1966, (with W. G. Craig, P. V. Demarco, D. W. Mathieson and W. B. Whalley)
- C. L. CHAKRABARTI
 "The Atomic Absorption Spectroscopy of Lead", *Analytica Chimica Acta*, Vol. XXXIV, 1966, pp. 269-277
 "Determination of Traces of Selenium and Tellurium by Atomic Absorption Spectroscopy" presented to the 49th Canadian Chemical Conference of the Chemical Institute of Canada, Saskatoon, 5-8 June, 1966
- J. M. HOLMES
 "Adsorption of various gases on graphitized carbon blacks", Amherst Adsorption Conference, Amherst, Mass., 6-7 May, 1966
- J. A. KONINGSTEIN
 "Crystal field calculation of trivalent Ytterbium ion Yttrium Aluminum Garnet and Yttrium Gallium Garnet", *Theoretica Chimica Acta*, 3, 271, 1965
 "Crystal field studies of excited states of Neodymium in Yttrium Gallium Garnet and Yttrium Aluminum Garnet," *Journal of Chemical Physics*, May, 1966
 "The geometric effect and Raman intensities", European Meeting on Molecular Spectroscopy, 15-21 August, 1965, Copenhagen
 "Crystal field studies of trivalent rare earth ions", University of Groningen, The Netherlands, 26 August, 1965
 idem, Technical University of Eindhoven, Eindhoven, The Netherlands, 28 August, 1965
 "Absorption, fluorescence and Raman spectra of rare earth ions", 5th National Symposium on Applied Spectroscopy, Chicago, 11-17 June, 1966

P. KRUIS

- "Electronic-Vibrational Energy Transfer in the Quenching of Mercury", Ph.D. thesis, University of Toronto, 1965, 185 pp.
- "Ultrasonic Absorption in Critical Binary Liquid Systems I", *Acta Chemica Scandinavica*, Vol. XX, 1966, pp. 231-239 (with T. A. Bak)

C. S. TSAI

- "A comparison of the proteolytic properties of the α - and β -lytic proteases", *Canadian Journal of Biochemistry*, Vol. XLIII, No. 1961, 1965, (with D. R. Whitaker, C. Roy and L. Jurasek)
- "Action of the α - and β -lytic proteases on two bacterial mucopeptides", *ibid.*, Vol. XLIII, No. 1971, 1965, (with D. R. Whitaker, L. Jurasek and D. C. Gillespie)

D. R. WILES

- "Preparation of Volatile Metal Chlorides from their Ores", Canadian Patent No. 728,070, 15 February, 1966, (with Bryan R. Hollebone)
- "Nuclear Recoil Reactions in Cyclopentadienylmanganese Tricarbonyl", *Canadian Journal of Chemistry*, Vol. XLIV, 1966, pp. 885-894, (with T. Costea, I. Negoescu and P. Vasudev)
- "The Education of the Science Teacher", paper read before the Science Teaching Conference of the Canadian Teachers' Federation, Ottawa, 4 March, 1966
- "Thallous-Thallic Exchange in Chloroacetic Acid Solutions", paper read before the 49th Canadian Chemical Conference, Chemical Institute of Canada, Saskatoon, 7 June, 1966, (with R. G. McGregor)
- "Les Effets du Récuit Atomique dans les Systèmes Organométalliques", paper given to the Radiochemistry Section, Institute of Atomic Physics, Bucharest, Romania, 16 July, 1965
- "Possible Use of Molten Pyridinium Chloride in Metal Refining", paper delivered to the Annual Convention, Canadian Institute of Mining and Metallurgical

Engineers, Ottawa, 30 August, 1965, (with W. A. Morgan)

Geology

P. A. HILL

- "Marcasite at Renison Bell", *Proceedings*, Royal Society, Tasmania, 1966, Vol. C, pp. 91-92
- "Joints, their initiation and propagation with respect to bedding", *Geological Magazine*, 1966
- "Aeolian and marine placers of Tasmania: Inaugural Address, Society of Submarine Geology, Washington, D.C., 24 May, 1966

J. M. MOORE

- "Chemical petrology of some Grenville schists near Fernleigh, Ontario", Geological Association of Canada, Winnipeg, 18 October, 1965. Abstract: *Bulletin of the Canadian Institute of Mining and Metallurgy*, Vol. LVIII, No. 909, 1965, (with A. W. Hounslow)
- "Influence of oxidation state on regional metamorphic zoning in pelites", American Geophysical Union, Washington, 22 April, 1966. Abstract: *Transactions of the American Geophysical Union*, Vol. XLVII, 1966, pp. 215-216
- "Preparation and analysis of silicate rocks and minerals, Carleton Geological Paper 66-2, 1966, (with A. W. Hounslow)

F. K. NORTH

- "The Curvature of the Antilles", reprinted in *Boletino Informativo Asociación Venezolana de Geología*, Vol. VIII, 1965, pp. 47-65

W. M. TUPPER

- "Geology of the Brunswick No. 6 and No. 12 Mining Area, Gloucester County, New Brunswick", Geological Survey of Canada Paper 65-13 and Map 9-1965, pp. 1-8, (with C. H. Stockwell)
- "Operation Bathurst: A Geochemical Program", Annual Review Number, *Northern Miner*, November, 1965, pp. 9-11
- "Trace Elements in some New Brunswick Soils", *Canadian Journal of Soil Science*, Vol. XLV, 1965, pp. 305-310, (with E. W. Presant)

"Lead content of Stream and Spring Sediments, Keno Hill Area, Yukon Territory", Geological Survey of Canada, Map 45-1965, and notes (with C. F. Gleeson)
 "World Facets", Ottawa Mineral Association, 9 November, 1965
 "Coding system for Geochemical Survey of Streams", Symposium on Geochemical Prospecting, Ottawa, 22 April, 1966

R. W. YOLE

"Statistics of Geological Education", Ottawa Geoscience Discussion Group, 4 May, 1966

Mathematics

P. R. BEESACK

Secondary School Mathematics, Grade Eleven, Preliminary Alberta Edition, Copp Clark, Toronto, 1965, Part 1, 254 pp; Part 2, 260 pp. (with W. B. MacLean, D. L. Mumford, W. W. Bates, and D. W. Alexander)

"A General Form of the Remainder in Taylor's Theorem", *American Mathematical Monthly*, Vol. LXXIII, 1966, pp. 64-67

"A Finite Horizon Dynamic Inventory Model with a Stockout Constraint", Eighth Annual Conference of the Canadian Operational Research Society, McGill University, 13 May, 1966

D. K. DALE

"Report on Research Studies Undertaken in Conjunction with the November, 1965, Board of Broadcast Measurement Survey", Board of Broadcast Measurement, Toronto, April, 1966

C. W. L. GARNER

"Coordinates for vertices of regular honeycombs in hyperbolic space", *Proceedings*, Royal Society A, Spring, 1966

M. S. MACPHAIL

"Karl Weierstrass, 1815-1897", commemorative lecture, University of Ottawa, 7 December, 1965

F. H. NORTHOVER

"Diffraction of Electric Waves round a finite, perfectly conducting

cone", *Journal Mathematics Analytic and Applied*, Vol. XII, No. 3, December, 1965, pp. 549-554

"Febry-Perot Interferometer as the centre of a focussed microwave system", General Motors' Defense Research Laboratory Report TR 65-14, July, 1965

B. M. PUTTASWAMAIAH

"Jacobi Endomorphisms", *American Mathematical Monthly*, Vol. XVIII, August-September, 1966

G. E. TANYI

"Pressure and Shear Waves Generated by an Explosion in an Elastic Sphere"; and "Rayleigh Waves Generated by an Explosion in an Elastic Sphere", *Geophysical Journal*, Royal Astronomical Society, London, 1965

"P and S Waves in a too Layered Spherical Earth"; "Generalized Storeley Waves in a too Layered Spherical Earth"; and "On a Space-Time Representation Form for Generalized Rayleigh Waves"; *ibid.*, 1966

Physics

J. E. HARDY

"Aspects of Quantum Mechanics", invited paper, Undergraduate Physics Conference, McGill University, 24 October, 1965

E. P. HINCKS

"Fine Structure and Isotope Shift in Muonic Lead", *Physical Review Letters*, Vol. XVI, No. 11, 14 March, 1966, pp. 434-439, (with H. L. Anderson, R. J. McKee, and C. K. Hargrove)

"Energy Levels of Muonic Atoms", Royal Society of Canada, June Meeting, 1966, Sherbrooke

"Hyperfine Structure of Mu-Atomic Transitions in Au", Annual Congress Canadian Association of Physicists, June, 1966, Sherbrooke

M. K. SUNDARESAN

"Kinetic Equation for a Plasma in a Strong Static Magnetic Field", *Canadian Journal of Physics*, Vol. XLIV, 1966, pp. 247-254
 " $\eta \pi \pi$ Model of X^0 and a Possible

" η - π Resonance", *The Physical Review*, Vol. CXLII, No. 4, 25 February, 1966 pp. 1126-1131, (with A. N. Mitra)

FACULTY OF ENGINEERING

M. A. COPELAND

"Minor Loop Loss Predictions in Devices Using Permanent Magnet Materials", International Conference on Magnetism, Stuttgart, Germany, May, 1966, (with G. R. Slemon)

G. D. CORMACK

"Effects of Negative Inductance and Load Impedance on the Pulse from a Capacitor Discharge Circuit", National Research Council Symposium on Plasma Physics, Ottawa, 13-15 October, 1965, (with A. D. Miller)

"Impact Luminosity Studies", *ibid.*, (with B. Jean and C. Morbey)

J. B. FORREST

"Dynamic Compression of Clay Under an Explosive Pulse", Annual Meeting, Society of Rheology, Cleveland, O., October, 1965, (with R. L. Konder)

D. A. GEORGE

"An Explicit Representation for Non-linear Systems", National Conference on Automatic Control 1965, Ottawa, 30 August, 1965, (with H. W. Smith)

"Optimum Filtering of PAM Signals", Communication Theory and Signal Processing Symposium, Kingston, 20 June, 1966

J. GOLDAK

"Lattice Parameters, Thermal Expansion and Gruneisen Coefficients of Zirconium from 4.2 to 1130°K", *Physical Review*, Vol.

CXLIV, 1966, p. 478, (with C. S. Barrett and L. Lloyd)

"Structure of GeTe", *Journal of Chemical Physics*, Vol. XLIV, No. 9, 1966, pp. 3323-3325, (with C. S. Barrett, D. Innes, and W. Youdelis)

"Diffraction Studies with 150KV x-rays", April, 1966, Meeting of the Ottawa Crystallographers' Association

M. A. GULLEN

"Translates of M-sequences", ERB-717, Radio and Electrical Engineering Division, National Research Council, Ottawa, September, 1965, 55 pp.

"Translates of M-sequences", Canadian and Eastern United States Regional Meeting of COMMON, Toronto, March, 1966

"Future Computing Needs of the University", Carleton University, February, 1966, 18 pp.

D. A. J. MILLAR

"Application of a Digital Computer to the Design of Gas Turbine Power Plants", Prime Mover Conference of the Engineering Institute of Canada, Hamilton, 12 October, 1965

J. RUPTASH

"Social, Economic and Scientific Changes as They Affect the Engineer and His Environment", Annual Meeting, Association of Professional Engineers, Ottawa, 25 February, 1966

W. WRIGHT

"Probability of Failure of Structures", Transactions of the Engineering Institute of Canada, Paper No. EIC-65-BR & STR 5, November, 1965

*Special honours, awards, offices held,
and other items of interest, not
previously reported*

Honours and Activities

FACULTY OF ARTS

DIVISION I

English

A. M. BEATTIE

Member, Television Council established by the Committee of Presidents of Provincially Assisted Universities of Ontario

Past-President and member of executive, Association of Canadian University Teachers of English

M. HANNA

Completed course work for a Licence en Philosophie sciences médiévales for Institut D'Etudes Médiévales, Montréal

M. LAFRANCE

Visiting Associate Professor of English at Seattle University, summer, 1966

J. STEELE

Addressed the Student Christian Movement on "The Student as an Intellectual Worker", 31 October, 1965

Helped to organize the University of Toronto-Carleton University Teach-In, 8-9 October, 1965

Faculty participant at the student Conference on the Financing of Higher Education, Golden Lake, 1-2 October, 1965

Represented Department of English at the English Section of the Ontario Modern Language Teachers' Association

Served on committees of the Carleton University Library,

Department of English, and
Ottawa libraries

Served on the Canadian Association of University Teachers salary committee and the sub-committee on differentials

D. J. WURTELE

Conducted seminar in archives administration, McGill University Graduate School of Library Science, March-April, 1966

History

D. G. BOWEN

Elected Fellow, Royal Society of Antiquaries of Ireland

D. M. L. FARR

Chairman, Commission on Canadian Studies, Annual Meeting of the Association of Universities and Colleges of Canada, Vancouver, 27 October, 1965

Chairman, Preparatory Committee for Conference on Studies on Canada in the Humanities and Social Sciences, University of Sherbrooke, 11-12 June, 1966

Member, Library Grants Committee, Canada Council

Member, Centennial Committee of the Association of Universities and Colleges of Canada

Representative of the Canadian Historical Association, Social Science Research Council of Canada

M. G. FRY

Canada Council short-term research grant for the summer of 1966, to work in London on study of foreign policy of Lloyd George

N. E. S. GRIFFITHS

Guest lecturer, Wellesley College,
26 May, 1966

S. R. MEALING

Awarded Canada Council Senior
Fellowship
Secretary, Social Science Research
Council of Canada
Secretary, Humanities Research
Council of Canada

F. OUELLET

Participation à une série de sémi-
naires donnés par un groupe de
professeurs de Queen's, de Trent
et de Carleton, octobre-novembre,
1965

M. TRUDEL

Nommé Président du Conseil des
Arts du Québec, fall, 1965. Nommé
membre du Jury universitaire du
Conseil des Arts du Canada,
fall, 1965

Journalism

W. EGGLESTON

Guest lecturer on Journalism and
Literature at the Banff School of
Fine Arts, July, 1965

W. H. KESTERTON

Member, National Press Club
Centennial Project Committee

T. J. SCANLON

Consultant to Special Planning
Secretariat, Privy Council Office
(War on Poverty)

Modern Languages

A. ELBAZ (French)

Faculty adviser to Overseas Stud-
ents, Carleton University
International Student Information
Service representative, Carleton
University

C. FLEISCHAUER (French)

Canada Council Summer Grant
1965

Judge, Western Quebec Public
Speaking Contest, spring, 1966

M. FURSTENWALD (German)

Awarded Ph.D., McGill University,
1965

R. D. GOULD (German)

Carleton University secretary,
Canadian German Academic
Exchange Association

R. L. JACKSON (Spanish)

Awarded Canada Council Fellow-
ship, summer, 1966

W. B. KAY (French)

Member, Carleton University
Summer Program Committee

E. KUSHNER (French)

Member, Bibliography Committee,
French VII (20th Century),
Modern Language Association
of America

Correspondent, Bibliography Com-
mittee, French VI (19th Century),
Modern Language Association
of America

Member of Executive, Humanities
Association of Canada
Canada Council short-term research
grant, for summer, 1966

Vice-President, Société des écrivains
canadiens, section d'Ottawa
Corresponding member for Carleton
University, Humanities Research
Council

G. MELNIKOV (Russian)

Member, Committee on Soviet and
East European Studies, Carleton
University

Assistant Editor, Canadian Slavonic
Papers, 1966-1969

R. RAVANO (Spanish)

Adviser to the Latin American Club,
Carleton University

J. S. TASSIE (French)

Attended Second International
Congress of Dialectologists,
Marburg, Germany, 5-10 Sep-
tember, 1965

Member, Selection Committee for
the Canada Council, 17 February,
1966

Member, Selection Committee,
Association of Universities and
Colleges of Canada, 17 March,
1966

Vice-President, Ontario Modern
Language Teachers' Association

P. VARNAI (Russian)

Member, Committee on Soviet and East European Studies, Carleton University

Philosophy

R. S. TALMAGE

Member, Planning Committee, Seventh Inter-American Congress of Philosophy

Psychology

D. K. BERNHARDT

"Preface to Psychology", 15 lectures in the CTV television series University of the Air, weekly from September to December, 1965, (with W. E. Walther)

Member, Training Committee, Ottawa Nursery School Association

E. J. BURWELL

Secretary, Training Committee, Ottawa Nursery School Association

P. D. MCCORMACK

Chairman, Program Committee, Ontario Psychological Association, 1965

Chairman, Program Committee, Canadian Psychological Association, 1966

Member, Collegiate Institute Board of Ottawa, Advisory Committee on Psychological Services, 1965-66

R. A. C. STEWART

Address on Child Development, St. James United Church, Ottawa, 7 November, 1965

F. R. WAKE

Member, Editorial Board, Child Development Abstracts and Bibliography

Resource person, Annual Meeting, Quebec Association of Protestant School Administrators, August, 1965

Member, Board of Directors, Youth Services Bureau, Ottawa

Member, Board of Directors, Elizabeth Fry Society, Ottawa

W. E. WALTHER

Preface to Psychology, in CTV

television series, University of the Air, weekly from September to December, 1965, (with D. K. Bernhardt)

Research consultant, Department of Psychiatry, Ottawa Civic Hospital

R. A. WENDT

Chairman, Human Resources Research Advisory Committee, Defence Research Board

Religion

L. M. READ

Member, executive of the Canadian Society for the Study of Religion
Chairman, National Steering Committee, Lay Schools of Theology
Chairman, Mackay Study Group, Mackay United Church

DIVISION II

Economics and Accounting

T. N. BREWIS (Economics)

President, Ottawa Chapter, Canadian Political Science Association

Member, Development Board, Eastern Ontario Development Association

W. I. GILLESPIE (Economics)

"The High School Graduate as a Self-Learning, Self-Teaching Individual", remarks delivered at the Orangeville District Secondary School Commencement Exercises, 5 November, 1965

H. S. GORDON (Economics)

Canada Council Senior Fellowship, 1964-65

Guggenheim Foundation Fellowship, 1965

Lecture on "Canada: Two Nations or One—or None?", York University, York, England, 9 November, 1964

Talk and discussion at University of Manitoba "Teach-in" on "Can Canada Survive?" 26 February, 1966

Talk on "The Current State of the Economy and Problems of Policy", Research Department

Seminar, Bank of Canada,
Ottawa, 30 March, 1966
Chairman, Manpower Adjustment
Research Committee of Canadian
Broadcasting Corporation and
National Association of Broadcast
Employees and Technicians

"Some Notes on the History of the
Theory of International Trade
Policy", Staff and Graduate
Students Seminar, University of
Western Ontario, 2 December,
1965

"Central Bank Problems and
Policy in Canada", symposium
on Canadian and American
Economic Relations, Niagara
University, Niagara, N.Y., 14
May, 1966

K. A. J. HAY (Economics)
Canada Council short-term grant
to participate in the Institute for
Economic Research, Queen's
University, summer, 1966

S. F. KALISKI (Economics)
Canada Council Senior Fellowship,
1966-67
Research Associate (without
stipend), Department of Econ-
omics, University of California,
Berkeley, 1966-67

N. H. LITHWICK (Economics)
Grant from Canadian Council on
Urban and Regional Research
for research on the impact of
taxation on urban land use
Co-Chairman, with G. Paquet, of
Canadian Political Science Asso-
ciation, Ottawa Branch Study
Group on Urbanization in Can-
ada. To edit the collected papers
as *Urban Studies: A Canadian
Perspective*
Consultant, Economic Council of
Canada

G. PAQUET (Economics)
Conseiller économique auprès du
Comité de Recherches sur l'As-
surance-Santé de la Province de
Québec
Co-Chairman, with N. H. Lithwick,
of the Canadian Political Science
Association, Ottawa Branch
Study Group on Urbanization
in Canada

Geography

D. M. ANDERSON
Grant from the National Advisory
Committee on Geographic Re-
search for regional fieldwork

J. P. JOHNSON, JR.
Grant from Arctic Institute of
North America in support of
research in the Icefield Ranges
in 1966

G. C. MERRILL
Appointed Vice-Chairman, Regional
Geography Committee, Commis-
sion of Geography, Pan American
Institute of Geography and
History

P. E. UREN
Managing Editor, *Canadian
Slavonic Papers*

Political Science, Public Administration, and Public Law

R. D. ABBOTT (Public Law)
Member, Steering Committee,
Ottawa Subsection on Admin-
istrative Law, Canadian Bar
Association
Legal Adviser, Civil Service Federa-
tion of Canada

A. BROMKE (Political Science)
Canada Council short-term grant
for a research trip to Eastern
Europe
Elected Vice-President, Canadian
Association of Slavists, 1966-67

F. J. E. JORDAN (Public Law)
Member, International Law Asso-
ciation, Canadian Branch
Member, Canadian Institute of
International Affairs

R. O. MACFARLANE (Public
Administration)
Chairman, Editorial Committee,
Canadian Geographical Journal
Co-Director, Senior Officers' Con-
ference, Ontario Civil Service
Commission, 16 May—3 June,
1966
Member, Cushman Award Com-
mittee of Public Personnel As-
sociation

Member, Steering Committee on
Schools of Public Administration
for International Institute of
Administrative Sciences

Consultant for Manitoba Department of Education, November, 1965

Member, Board of Governors for
College of Applied Arts and
Technology, Region 1

R. R. MARCH (Political Science)

Represented the Carleton University Social Science Data Archive at the Third Technical Conference Council of Social Science Data Archives, University of Michigan, 9-12 May, 1966

Canadian Broadcasting Corporation lecture on "How Political Party Candidates are Chosen", 20 October, 1965

K. Z. PALTIEL (Political Science)

Research Director and Acting Secretary, Advisory Committee on Election Expenses

D. C. ROWAT (Political Science)

Member, Executive Committee, Canadian Association of University Teachers

M. STEIN (Political Science)

Prepared Current Events Examination for the Army Promotion Examination from Captain to Major, 1966

Chairman, Guest Lectures, Department of Political Science

A. M. WILLMS (Public Law)

Lectures and seminar discussions for Civil Service Commission, with Intermediate Officers, seven sessions

"Coordination and Control for Government Managers", lectures to two courses in personnel administration and to two Junior Executive Officers courses, Civil Service Commission

Program Chairman for Institute of Public Administration, Ottawa Chapter

Sociology

H. BURSHTYN

Member, Special Canadian Association of University Teachers'

Committee on Association of Universities and Colleges of Canada Time Allocation Studies
Consultant on Computer Analysis to the Department of Sociology, Trent University

S. S. GUTERMAN

Awarded Ph.D. at Columbia University. Dissertation, "Moral Character and Social Milieu: A Social Psychological Study", deals with Machiavellianism among white-collar and managerial personnel in 26 hotels

B. A. MCFARLANE

Appointed Member, National Advisory Committee on Dental and Oral Health

Appointed Observer-Member of Committee to establish a School for Industrial Engineers in Seville, Spain, Directorate for Scientific Affairs, Organization for Economic Co-operation and Development, Paris, 15-17 December, 1965

Member, Academic Library Steering Committee, Association of Universities and Colleges of Canada

Member, Committee on the Co-ordination of Academic Library Services, reporting to the Committee of Presidents of the Provincially Assisted Universities of Ontario

P. C. PINEO

Participant, Seminar on Population and Urban Research, University of Western Ontario, 24-25 March, 1966

J. PORTER

Appointed Member of Academic Panel, Canada Council

Awarded Canadian Government Fellowship to International Institute for Labour Studies, Geneva, Switzerland, 1966-67

V. F. VALENTINE

Social Science representative, Research Committee of the Arctic Institute of North America

Vice-President, Canadian Research Centre for Anthropology, and member of the Board of Editors for *Anthropologica*

Member, Executive, Ottawa Chapter, Canadian Political Science Association

Member, Board of Directors of the Canadian Centre for Community Studies

Consultant to the Carrothers' Commission investigating self government in the Canadian North

Member, Board of Directors of the C.B.C.-Indian-Eskimo Association Northern Broadcast Committee

Consultant to the Indian Affairs Branch and the Citizenship Branch, Department of Citizenship and Immigration

Member, Board of Directors of St. Paul University's Lower Town research project

F. G. VALLEE

Appointed member, Northwest Territories Legislative Council, Sessions at Ottawa, October, 1965 and January-February, 1966

Editorial Director of *Anthropologica*

Member, Advisory Committee, Institute for French Canadian Studies, McGill University

Chairman, Research Committee for project, "Indians and the Law", sponsored by the Canadian Corrections Association

Member, Research Committee, Canadian Association of Sociology and Anthropology Adjudicator, Canada Council Scholarships Committee, and Research Adjudication Committee, Department of National Health and Welfare

Consultant, Commission of Inquiry on the Future of Government in the Northwest Territories (Carrothers' Commission)

Member of Executive, Ottawa Citizenship Council

D. R. WHYTE

Consultant to the Agricultural Rehabilitation and Development Agency, Ottawa, 1965-66

Consultant to Strathmere Associates, Consultants in Social Research, 1966

FACULTY OF SCIENCE

Biology

J. M. ANDERSON

Director, 1965 Royal Canadian Institute Summer Science Program Vice-Chairman (interim phase), Biological Council of Canada
Appointed to Board of Directors, Canadian Youth Science Foundation

T. W. BETZ

Awarded Ph.D., University of Illinois, October, 1965
Member, American Association for the Advancement of Science, American Society of Zoologists
Member, American Institute of Biological Sciences
Participated in the Endocrinological Section of the International Symposium on Poisonous Animals sponsored by the Butantan Institute in Sao Paulo, Brazil, 17-23 July, 1966
Attended symposium on the Hypothalamic Control of the Anterior Pituitary Gland sponsored by the Comparative Endocrinology Section of the American Association for the Advancement of Science, Berkeley, California, December, 1965
Judge, Ottawa Regional Science Fair, 14-15 April, 1966

G. SETTERFIELD

Associate Editor, *Canadian Journal of Botany*
Treasurer, the Canadian Society for Cell Biology

D. A. SMITH

Awarded Royal Society and Nuffield Foundation Commonwealth Bursary to carry out research at Makerere University College, Kampala, Uganda, 1966-67

J. A. WEBB

Publicity Officer, Canadian Society of Plant Physiologists

Chemistry

C. H. AMBERG

External Examiner in Physical Chemistry, University of Guyana
President, Family Service Centre of Ottawa

J. W. APSIMON

Judge, Ottawa Regional Science Fair, 14-15 April, 1966

Visiting Scientist, School of Pharmacy, University of London, England, June-July, 1966

Participant, International Union of Pure and Applied Chemistry, International Symposium on the Chemistry of Natural Products, Stockholm, June, 1966

J. M. HOLMES

Member, Credentials Committee, Chemical Institute of Canada
Vice-Chairman, Ontario Council of University Faculty Associations

J. A. KONINGSTEIN

Consulting for the Argonne National Laboratory, Illinois, June, 1965—July, 1966

Visiting Scientist, National Research Council of Canada, summer, 1966

P. KRUIS

Awarded Ph.D. in Physical Chemistry, University of Toronto, November, 1965

M. PARRIS

Membership Chairman, Ottawa Section, Chemical Institute of Canada

D. R. WILES

Member, General-Advanced Chemistry Committee, Ontario Department of Education, October, 1965—January, 1966

Member, Visiting Team to U.S. Graduate Schools "Operation Retrieval", Association of Universities and Colleges of Canada, March, 1966

Appointed member, Editorial Board *Science Affairs*, May, 1966

Appointed Program Director, Junior Science Lecture Series of Expo '67, May, 1966

Appointed Director of Education and Student Activities, Chemical Institute of Canada, June, 1966

Geology

P. A. HILL

Elected Fellow, Royal Society of Tasmania, 1965

Canadian Representative, Society of Submarine Geology, 1966

J. M. MOORE

Judge, Ottawa Regional Science Fair, April 1965-1966

F. K. NORTH

Appointed Regional Editor, International Symposium on the Devonian System

W. M. TUPPER

Chairman, Lecture Program, Geology Division, Canadian Institute of Mining and Metallurgy

Chairman, Geochemical Discussion Group, Ottawa

Chairman, Technical Session, Symposium on Geochemical Prospecting, Ottawa, 22 April, 1966

Awarded National Research Council Overseas Post-doctoral Fellowship for study at the Institute of Geological Sciences, London, 1966-67

Mathematics

P. R. BEESACK

Elected Member of Council, Canadian Mathematical Congress
Lecturer, "Dynamic Programming", Operational Research Establishment Seminar, Defence Research Board, Ottawa, November-December, 1965

Lecturer, "Function as a Mapping" and "Calculus in Grade 13", Ottawa Collegiate Institute Board Seminar in the new Grade 13 Mathematics A course, 21 October, 1965 and 16 December, 1965

D. K. DALE

Elected fellow, Royal Statistical Society, 24 November, 1965

C. W. L. GARNER

Fellow, Summer Research Institute of Canadian Mathematical Congress, 15 May-15 August, 1965

J. E. GRAHAM

Member, Dominion Bureau of Statistics' Committee on Staff Training and Career Development

M. S. MACPHAIL

Member, Committee on Adequacy of Science Representation, Royal Society of Canada

F. H. NORTHOVER

Senior Associate Research Mathematician, General Motors' Defense Research Laboratories, Santa Barbara, Calif., theoretical work concerning application of Interferometry to Microwave Lenses, 1 July, 1964 to 31 August, 1965

B. M. PUTTASWAMIAH

Fellow, Canadian Mathematical Congress, Kingston, 1965 and 1966

D. W. SIDA

Fellow, Canadian Mathematical Congress, Summer Research Institute, Dalhousie University, 1966

G. E. TANYI

Fellow, Royal Astronomical Society, London, 1966

Physics

J. E. Hardy

Judge, Ottawa Regional Science Fair, 14-15 April, 1966

E. P. HINCKS

Elected Fellow, Royal Society of Canada, June, 1966

Member, ING Study Advisory Committee of Atomic Energy of Canada Limited

Chairman, High Energy Physics Committee of the Canadian Association of Physicists

G. R. LOVE

Chairman, Ottawa and Area Local Section, Canadian Association of Physicists

FACULTY OF ENGINEERING

G. D. CORMACK

Research Consultant on Impact Phenomena, Space Science Division, Computing Devices of Canada Ltd., Ottawa

J. B. FORREST

Member, Association of Professional Engineers of the Province of Ontario

D. A. GEORGE

Vice-Chairman, Institute of Electrical and Electronics Engineers, Region 7 (Canada) Student Activities Committee
Student Counsellor at Carleton University, Institute of Electrical and Electronics Engineers
Consultant on Communication and Information Theory, Defence Research Telecommunications Establishment, Ottawa
Consultant on Signal Processing, Canadian Westinghouse Co. Ltd., Hamilton

J. GOLDAK

Member, Semiconductor Subcommittee, Electronic Components Research and Development Committee, Defence Research Board

R. C. G. HAAS

Secretary, Canadian Good Roads Association Special Committee on Highway Engineering Education
Member, Management Committee of Engineering Institute of Canada, Ottawa, December, 1965
Carleton University Representative, Highway Research Board Meeting, Washington, January, 1966
Awarded Warren Bituminous Good Roads Scholarship, May, 1966, for Ph.D. study at University of Waterloo

D. A. J. MILLAR

Member, National Research Council Associate Committee on Propulsion

J. RUPTASH

Member, Engineering Institute of Canada Committee on Engineering Research
Committee Member, Canadian Club of Ottawa
Member, Advisory Committee for Ontario Vocational Centre of Ottawa

ADMINISTRATIVE STAFF

J. CARTER

Chairman, Statistics Committee,
Canadian Library Association

F. DAMTOFT

Chairman, Danish Centennial
Committee (British Columbia)

H. G. GIFFORD

Member, Executive Council,
Canadian Association of College
and University Libraries

Chairman, Committee on Customs
Difficulties, Canadian Association
of College and University Libra-
ries

Member, Joint consulting service
for College Libraries, Canadian
Association of College and Uni-
versity Libraries and Association
of Universities and Colleges of
Canada

Member, Committee on the Co-

ordination of Academic Library
Services

Co-Chairman, 64th Annual Con-
ference, Ontario Library
Association

M. SOSNOWSKY

Member, Plan and Action Com-
mittee of the Technical Services
Section, Canadian Library
Association

Member, National Executive,
Ukrainian Canadian Committee

Member, National Executive,
Canadian League for Ukraine's
Liberation

Member, Executive, Association of
Ukrainian Journalists in Canada

Member, Board of Directors,
Studium Research Institute, Inc.

Member, Editorial Board of "Homin
Ukrainy", Ukrainian weekly in
Toronto, and "Our Viewpoint",
published monthly by Studium
Research Institute, Information
Service

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